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The World Food Day Report

The President's Report
to the U.S. Congress

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BEST AVAILABLE DOCUMENT

EXECUTIVE SUMMARY

If the world's total food supply were distributed evenly, each person would have a more than ample supply of calories, protein, and nutrients. Yet the abundance of food on a global scale has not resulted in a world free from hunger because the available food is not equally accessible either to all countries or to all households even in food-abundant countries.

The United Nations Food and Agricultural Organization (FAO) estimates that in 1991 more than 780 million adults and children — 20 percent of the world's population — were chronically undernourished, consuming insufficient calories for sustained light work. Although there are more hungry people today than ever before, largely as a result of population growth in very poor countries, the *proportion* of the world's population that lives in hunger is slowly declining.

Since 1954, the U.S. Public Law 480 (P.L. 480) program has provided more than \$46 billion in food assistance to developing countries. The P.L. 480 program uses America's "abundant agricultural productivity to promote the foreign policy of the United States by enhancing the food security of the developing world." The program defines *food security* as "access by all people at all times to sufficient food and nutrition for a healthy and productive life."

Food security is a dynamic interaction between *national self-reliance*, or national supply, and *household access*, or household demand. Food security is obtained when supplies in a nation are sufficient to provide everyone with an adequate diet, and households are able to exercise effective demand and acquire and utilize sufficient food.

The ultimate challenge, especially in the poorer countries of the world, is to mobilize resources to attack the causes as well as the effects of poverty. Through P.L. 480 programs, the United States supports development initiatives designed to interrupt the cycle of poverty and hunger and to generate equitable, broad-based economic growth in order to combat food insecurity.

The 1990 Agricultural Development and Trade Act passed by Congress provided innovative and flexible new programming mechanisms which have allowed the United States to meet several special challenges in this year's food assistance programs. Following the disintegration of the former Soviet Union, thousands of people found themselves without economic resources or access to food; through its food assistance programs, the United States has helped to increase food supplies and provide "safety nets" for these vulnerable groups in the new independent states of the former Soviet Union.

Severe suffering from hunger is found in countries in which civil war, political strife, or natural disasters have displaced thousands of hungry people, creating famine among powerless groups of refugees. Using the provisions of the new P.L. 480 program, the U.S. Government responded quickly to the terrible drought affecting eight Southern African countries; it extended a lifeline to those in need, increasing available food supplies to prevent massive starvation.

Under the 1990 legislation, the U.S. Agency for International Development (A.I.D.) and the U.S. Department of Agriculture (USDA) share the responsibility for implementing Congress' legislative intent through a variety of programs and projects. In 1992, these two agencies implemented food assistance programs in 90 countries, providing more than 7.6 million metric tons of U.S. commodities, with a total program value of \$2.12 billion.

THE WORLD FOOD DAY REPORT

During the last four decades, the world's population has grown at an unprecedented rate, from 2.3 billion in 1950 to more than 5.2 billion in 1991. Through innovations in productivity, storage, and marketing, the world's total food production has outpaced the growth in population. At an aggregate level, then, the world has more than enough food. Indeed, if global food supplies were distributed evenly to the world's citizens, each would have a more than ample supply of calories, protein, and other nutrients. Why, then, do millions of people worldwide go hungry?

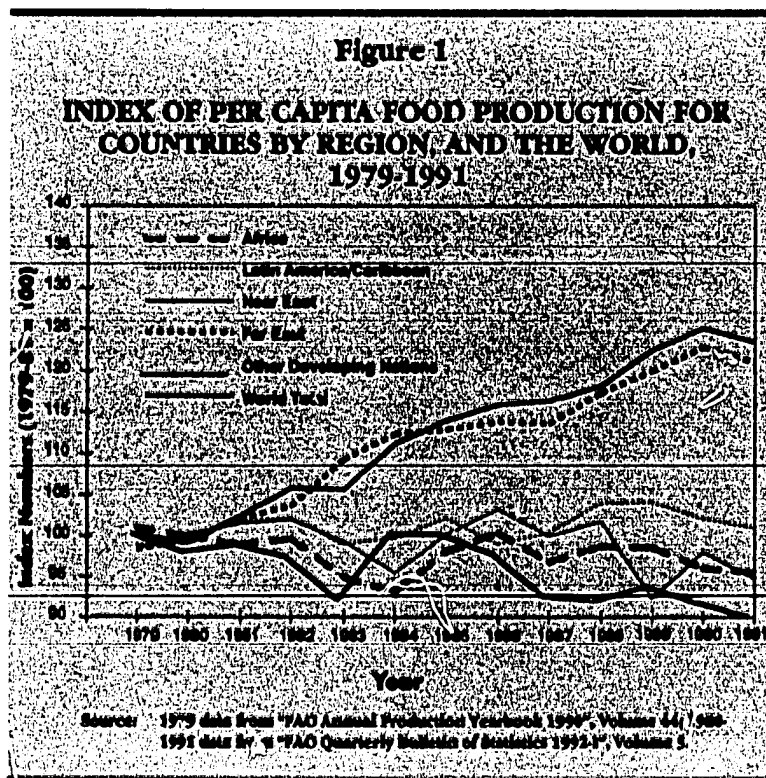
UNDERSTANDING HUNGER

The abundance of food on a global scale has not resulted in a world free from hunger because the available food is not equally accessible to all countries and to all households within them. Many factors interact to create this insecure situation. Government policies may prevent food markets from operating effectively. Marketing and transport systems may be ineffective. War and conflict may cut off whole sections of a country's people from food supplies.

In many developing and reindustrializing nations, national and local markets are dysfunctional, and governments lack the foreign exchange to participate actively in international markets for food. Further complicating the problem are inadequate food distribution systems, which, in many countries, are unable to meet their consumers' needs. Finally, many households do not have the necessary resources to buy the food they need if they cannot grow it themselves, and individuals often lack the necessary environmental and health resources (e.g., sanitation) to ensure that the food they do eat is utilized effectively by their bodies.

Although the world continues to produce enough food *in total* to feed its inhabitants, at regional and national levels, per capita food production has not grown steadily. In the Far East, per capita production has increased consistently since 1979, while in the Latin America/Caribbean region, production has remained relatively stable at per capita levels slightly above those of 1979. In the Near East, production has been volatile in the past decade, averaging below 1979 levels, while in Africa and in other developing nations, per capita production has decreased fairly consistently since 1979 (see Figure 1).

Countries that do not produce adequate food stocks for their own needs turn to international markets for commercial imports and to



international donors when their financial and economic situations prohibit commercial purchases. But even when a country can acquire adequate supplies of food on a national level, individuals and households without access to those aggregate supplies may still go hungry.

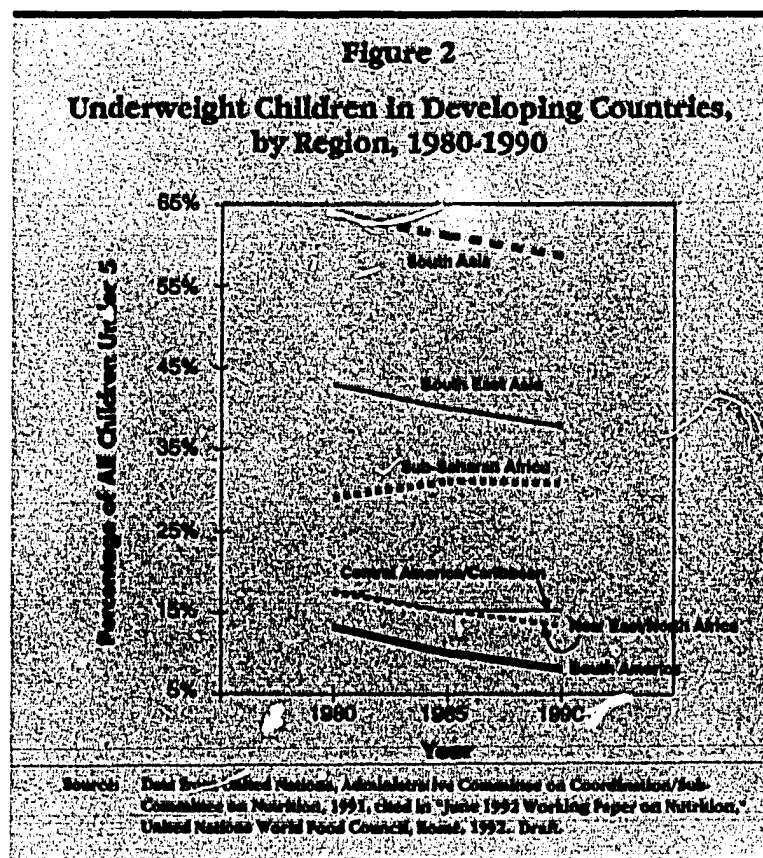
In 1991, more than 780 million adults and children — 20 percent of the world's population — were chronically undernourished according to FAO, consuming insufficient calories for sustained light work. Although there are more hungry people today than ever before, largely as a result of population growth in very poor countries, the *proportion* of the world's population that lives in hunger is slowly declining, down from 36 percent in 1970. Figure 2 presents a graphic illustration of the trends in hunger among children, the world's most vulnerable group.

The energy required for normal growth, home activity, and work, is provided by the calories consumed each day. The real food security of a country cannot be determined by the national average caloric consumption; some people consume more calories than the average, and many consume far fewer.

Inadequate or *energy deficient* diets not only inhibit work and normal growth, but also increase vulnerability to disease, reduce productivity or concentration, and limit the benefits gained from schooling and training.

The lack of food security, which can be referred to as *food insecurity*, means that millions of people suffer from hunger and malnutrition — often children, for whom malnutrition causes grievous and irreversible damage. In addition, in many countries, food insecurity acts as a barrier to sustainable long-term economic growth.

Hunger and malnutrition are not "agricultural" or "health" problems, but are issues that cut across all sectors of society. A population physically and mentally weakened by hunger cannot generate economic development; the potential of millions of lives is degraded or reduced.



FOOD SECURITY AND THE P.L. 480 PROGRAM

Food insecurity is a multi-faceted problem requiring attack on many fronts. Many countries, many households, and many individuals have inadequate access to food, either because supplies are not available or because they do not have the resources needed to acquire available food. For more than five decades, Americans have reached out to their global neighbors suffering from the effects of food insecurity through development assistance and food aid programs, providing U.S.-grown food commodities through grants and concessional loans and contributing to multinational food aid organizations such as the World Food Program.

Since 1954, the P.L. 480 program has provided developing countries with more than \$46 billion in food assistance. U.S. Government policy is summarized in the Agricultural Development and Trade Act of 1990, which states:

"It is the policy of the United States to use its abundant agricultural productivity to promote the foreign policy of the United States by enhancing the food security of the developing world through the use of agricultural commodities and local currencies accruing under the Act to:

- 1) Combat world hunger and malnutrition and their causes;
- 2) Promote broad-based, equitable, and sustainable development, including agricultural development;
- 3) Expand international trade;
- 4) Develop and expand export markets for United States agricultural commodities; and
- 5) Foster and encourage the development of private enterprise and democratic participation in developing countries."

The Act defines *food security* as "access by all people at all times to sufficient food and nutrition for a healthy and productive life." Under the law, A.I.D. and USDA share the responsibility for implementing Congress' legislative intent through a variety of programs and projects.

The U.S. Government food assistance program has five major elements: providing concessional loans in support of trade and development assistance (Title I), donating agricultural commodities in support of emergency and non-emergency food aid programs (Title II), providing food to the poorest countries (Title III), donating surplus agricultural commodities to relieve temporary commodity shortfalls (Section 416(b)), and supporting progress toward democracy and open market systems (the Food for Progress program).

We are now completing the first full year of implementing food aid programs under the 1990 food aid legislation. During this time, A.I.D. has published and put into operation new and final program guidance for Title II, Title III, P.L. 480 private voluntary organization (PVO) administrative support grants and the farmer-to-farmer program. A.I.D. has also produced a Policy Determination to institutionalize and expand understanding of the concept of food security and to facilitate program integration. After these new food aid programs, particularly Title III, begin to mature over the next year, we should have the information and technological ability to report on food security progress, or indications of progress, on a country-specific and program-specific basis.

Availability, Access, and Utilization

In the Food Security Policy Determination issued in April 1992 (PD-19), A.I.D. notes that "within the context of food security, three distinct variables are central to the attainment of food security: availability, access, and utilization." Understanding these three variables, and their roles in producing food insecurity, can help identify constraints and define potential interventions in order to enhance food security in a specific country or within a particularly vulnerable group.

Food availability is achieved when sufficient quantities of appropriate, necessary food are consistently available to individuals within a country (through domestic production, commercial imports, or donors). *Food access* is ensured when households and individuals have adequate resources (e.g., income) to obtain appropriate foods for an adequate and nutritious diet. *Food utilization* is the proper biological use of food, requiring proper food processing and storage, adequate knowledge of nutrition and child care, and health and sanitation services.

CHALLENGES TO AVAILABILITY, ACCESS, AND UTILIZATION

Under the legislative provisions of the Agricultural Development and Trade Act of 1990, P.L. 480 resources can be used in many innovative ways, providing commodities and program support through local currency to attack the many factors which constrain food security.

Constraints to Food Availability: inappropriate agricultural practices and technologies; inappropriate economic policies (e.g., pricing, tariffs, taxes); inadequate agricultural inputs; dysfunctional transportation and distribution systems; ineffective private sector marketing systems; inability to predict, assess, and cope with emergency situations; natural disasters and climatic constraints; and population growth rates which offset increased production and/or imports.

Constraints to Food Access: insufficient economic growth leading to a lack of job opportunities and economic incentives; inadequate training and/or job skills; lack of credit or other means to improve asset and income status; inappropriate national economic policies; and food losses associated with ineffective harvesting and storage.

Constraints to Food Utilization: nutrient losses due to food preparation; inadequate knowledge and practice of health techniques, including child care and sanitation; and cultural practices that limit consumption by certain groups or family members.

Together with other donor nations, working in partnership with developing and reindustrializing countries, we have learned over time that there is no one ideal mechanism for attaining worldwide food security. Many countries, recognizing their own risk of food insecurity, have focused intensively on increasing agricultural production within national borders — “food self-sufficiency.” However, other factors prevent countries from achieving food security, including the volatility of harvests and prices, inadequate storage and distribution, poor marketing systems, lack of foreign exchange, and inappropriate government policies.

Recognizing the need to address these constraints, governments increasingly strive to achieve “food self-reliance” at the national level. Food self-reliance is the point at which a country can feed itself through a combination of its own agricultural production and commercial imports of food. However, development analysts now recognize that while national food self-reliance can overcome many of the barriers to food security, other barriers remain. At the household and individual level, other factors such as incomes, prices, hygiene, and health conditions determine a household's ability to access the available food and an individual's ability to utilize the food effectively. Household-level food intake, like adequate national supplies, is a necessary but not a sufficient condition for adequate nutritional status.

National Self-Reliance and Household Access

Food security, then, can be seen as a dynamic interaction between *national self-reliance*, or national supply, and *household access*, or household demand. Food security is obtained when supplies in a nation are sufficient to

provide everyone with an adequate diet, and households are able to exercise effective demand and acquire and utilize sufficient food.

The "supply" side of the equation is a national-level issue; it involves maximizing efficient domestic production and effective commercial imports. In countries that are not yet food self-reliant, food aid and other external assistance can be mobilized to supplement domestic supplies.

The "demand" side of the equation works at the household level; it involves ensuring that households can either produce their own food or earn income with which to purchase it. In countries where incomes are too low, too unstable, or unevenly distributed, or where food prices are too high or too unstable, food aid and other external assistance can be used to support development programs and sectoral initiatives which increase broad-based income growth and stabilize prices.

Enough is known to confront and meet the challenges posed by hunger and malnutrition. Through economic development assistance, and food security and nutrition programs, financed through P.L. 480 and other sources, the U.S. Government plays a leading role in enhancing food security and improving the nutritional status of the world's poorest people.

The broader challenge, especially in the poorer countries of the world, is to mobilize the resources to attack the root causes of poverty. The special programs and resources of P.L. 480's Title III program support development initiatives designed to promote policy reforms and interrupt the cycle of poverty and hunger in order to generate equitable, broad-based economic growth that can combat food insecurity.

Household Food Security and the Role of Women

In most developing countries, improving household food security requires a special understanding of the role of women, because they play critical roles as food producers, as income earners, and as caretakers and food managers. Congress, therefore, specifically included improving the nutritional status of women and young children among the stated objectives and goals of the P.L. 480 program.

In Africa, the world's most food-insecure region, most farmers are women, and roughly one third of all rural households are currently headed by women, in large part because drought and debt have provoked a dramatic increase in male migration to urban centers. Women produce nearly three quarters of all food grown on the African continent. In many African societies, women do all of the food processing at the household level, fetch most of the water and fuelwood, produce as much as 70 percent of the finished foodstuffs, handle up to 60 percent of the marketing, and perform at least half of the tasks involved in storing food and raising animals.

Although the statistics may differ in other regions of the world, the general phenomenon is similar: women bear responsibility for managing household food stocks and maximizing the household's access to food, but they are often constrained by lack of resources or access to necessary services. Women's burdens are further exacerbated by the physical and nutritional demands of motherhood, often neglected in fulfilling the needs of other household members. This results in poor maternal and neonatal nutrition and high infant mortality rates.

Food insecurity at the household level arises from fluctuations in the amount of food provided by the work and the wealth of the household. The level of food consumption can vary because of shocks in work, in production, or in assets, and because of changes in the quantity of food available or in the price.

MATERNAL AND CHILD HEALTH: A SUCCESS STORY

Pregnant and nursing mothers, and children under five years of age, have greater nutritional needs than the rest of the population; yet they receive the least nourishment. In 1990, more than 38 percent of children under five in developing countries were estimated to be malnourished and underweight for their age. A.I.D. targets the urgent needs of mothers and children through a variety of programs, including maternal and child health programs managed by PVOs in 29 countries around the world.

In India, CARE and A.I.D. are contributing to a unique comprehensive child survival program, the Integrated Child Development Services (ICDS). CARE manages food aid commodities provided through Title II of the P.L. 480 program and works in partnership with the Indian Government to provide nutrition, health, and pre-school educational services for poor children and pregnant and nursing mothers.

During FY 1992, CARE programmed nearly a quarter of a million metric tons of food for more than 7 million children and 1.7 million pregnant and nursing mothers, representing about 40 percent of total ICDS food. The Indian Government, which has primary responsibility for the program's development and implementation, hopes to cover the entire nation by the year 2000.

ICDS is not only one of the largest nutrition-centered projects in A.I.D.'s portfolio, but also one of the most carefully monitored and evaluated. ICDS is an exemplary model for maternal and child health programs worldwide; its results show that integration of nutrition concerns with other child-survival interventions can produce significant improvements in the health and nutritional status of women and children, and that these improvements are sustainable over time.

By targeting selected interventions to improve food security at the household level — household access to food and individual utilization of food — A.I.D. is reaching the most vulnerable members of developing countries' poorest groups (i.e., mothers and children).

Food aid programming contributes to those targeted interventions — through Title II direct school feeding programs, through maternal and child health projects managed by PVOs, and through national and regional health and nutrition projects.

In addition, through the P.L. 480 Title III program, A.I.D. works at the macro level to enhance national food self-reliance and contribute to food security. Because all efforts to increase household food security take place in the context of macroeconomic policies, there are policy measures that governments can adopt to improve the economic context. For example, changes in the economic structure and incentives surrounding cash cropping and other income-generating activities can provide alternative sources of income by diversifying the household's "portfolio." So carefully designed programs of national policy reform and macroeconomic change can produce effects on the more nutritionally vulnerable women and children.

Host-country-owned local currencies generated by sales of Title III program food commodities can be used to support policies that will generate broad-based, sustainable economic growth. Some Title III local currencies are also used to support projects with an impact on poor households, rural and urban, and on the women and children in them.

FOOD SECURITY AROUND THE WORLD: REGIONAL SNAPSHOTS

Africa

In Africa, the availability of food has improved in recent years despite a series of disastrous droughts. But the average per capita calorie consumption for the region is barely 2,000 calories per day, and one quarter of Africa's population continues to face chronic food insecurity or outright hunger. Despite a 5 percent increase in food production, a 3.4 percent increase in food sector activity (including food production, processing, marketing, and other food-related agribusiness), and increased food imports, more people were hungry in Africa in 1990 than in previous years.

Many factors affect Africa's struggle for food security.

According to the United Nations Development Programme, 400 million Africans will live in absolute poverty by 1995 unless the continent's continuing decline in economic performance is reversed.

Africa's population growth rate, estimated at 3 to 3.2 percent in 1990, has continued to increase and often equals or outpaces economic growth (which was 3 percent in 1990, for example). Additionally, while the population growth rate will begin to decline in 1995, the size of Africa's population will continue to grow well into the next century, more than doubling the continent's 1990 population by 2025.

MALI: A P.L. 480 SUCCESS STORY

The current Mali P.L. 480 Title III program, a follow-on to the earlier Title II Section 206 program, supports the Government of Mali's cereals market reform program, which began in 1981. Before the inception of this program, a monopolistic public enterprise dominated the marketing and distribution of cereals in Mali. Both producer and consumer prices were officially set by government commissions. The government's aim was total suppression of all private sector grain trade.

Over the past 10 years, the cereals reform program has achieved the following: 1) reduced the government's role in cereals marketing; 2) abolished the official price support system; 3) liberalized cereals marketing; and 4) more effectively managed the official grain reserve. Market price information systems established in 1985 have been expanded to cover all major crops.

As a direct result of these reforms, the food security of the vulnerable population has been improved. Per capita grain production has outpaced population growth for the past several years, with annual growth in grain production reaching over 5 percent. Consumer prices have decreased, allowing Malians with lower incomes increased access to food. In addition, the annual grain price variation has been reduced, particularly in 1991 due to wide dissemination of market price information achieved under the most recent Title III program. The role of the parastatal has been reduced to ensuring adequate food to localized food-risk zones in a timely manner, and the costs of operating the parastatal have been cut by nearly 90 percent.

Civil conflict and drought caused major famines in specific regions, such as the Horn and Southern Africa. There are more civil conflicts being fought in Africa today than in any other region of the world. Where war and famine reign, food provided as relief aid is often used as a weapon. Also, all too often, conflicting groups use hungry people as political hostages.

Although conditions in some African countries are grim and the continent remains relatively less developed than other regions, there are positive signs that Africans are responding to the development challenges in the region in order to create a better life for the next generation. Economic and political liberalization is spreading throughout the continent, and peace initiatives are moving forward in several war-torn countries. Increasing attention is being given to the welfare of all members of society. However, the short and medium-term impacts of these changes will mean increasing demand for food and food imports, as liberalizing markets result in freely moving prices. Food security will remain a critical issue for Africans for the foreseeable future.

Latin America and the Caribbean

In Latin America and the Caribbean, the trend continues to be favorable, with average daily energy consumption more than 2,700 calories per capita, as compared to the 2,300 calories estimated by A.I.D. as being necessary to support normal physical and mental activity. However, the debt crisis of the 1980s drastically reduced real wages and increased poverty; the region still has not regained the level of average income it had reached before the debt crisis began. Some countries in the region have introduced programs which include measures to alleviate poverty and extend basic services for poor people. While some social indicators, such as life expectancy and literacy rates, continued to improve during the 1980s, the quality of health services and education declined greatly.

HONDURAS: A P.L. 480 SUCCESS STORY

In the first year of its three-year Title III program, Honduras made excellent progress in adopting agricultural policy reforms specified by the Title III Agreement.

The passage of the Agricultural Modernization Law by the Honduran Congress in March 1992 will be critical to increasing investment, agricultural production, and exports. The law's passage has resulted in 1) improved land tenure security, 2) legalization of land rentals, 3) equitable treatment for women in land tenure, and 4) elimination of all import/export controls on agricultural trade.

The implementation of this reform lays the foundation for an overall increase in food security by providing the poorest people of Honduras the opportunity to increase their real incomes and daily consumption.

In Latin America, it is poverty which visibly creates food insecurity, and the challenge is to attack poverty because, even with the average caloric intake increasing, there are still large populations of poor who are well below the average nutritional level.

Near East and North Africa

In the Near East, the crisis which followed Iraq's invasion of Kuwait in 1990 led to increased hunger in much of the region. Massive numbers of refugees and transiting migrant workers placed heavy burdens on Jordan, Turkey, and Iran, and the war and civil strife had tremendous human costs in Iraq and Kuwait themselves. Future activities in the region must focus resources on long-term development in the region's poorer countries.

Asia

Asia has made considerable progress in increasing food production and reducing the *proportion* of the population that is hungry. According to the World Food Council, growth in food production in Asia will probably exceed growth in demand over the next decade. Economic growth in Asia (excluding Japan) was an impressive 5.8 percent in 1990.

These aggregate figures, however, obscure serious hunger and poverty in some parts of Asia. Some 300 million chronically hungry people reside in Asia and the Pacific; this represents a significant portion of the developing world's hungry people. Over half of the world's one billion people at risk from iodine deficiency disorders live in Southeast Asia, and vitamin A deficiency is highly prevalent in South and Southeast Asia.

SRI LANKA: A P.L. 480 SUCCESS STORY

Sri Lanka has made impressive progress toward realizing the goals of the P.L. 480 Title III program. In less than one year, the program has resulted in important first steps on the road to the privatization of government enterprises. The government has moved to restructure and privatize the Fisheries Harbor Corporation, retrenching more than 200 redundant staff and divesting more than 50 percent of total assets to the private sector.

The Sri Lankan Government has also gone beyond its benchmark goal of developing an action plan for the privatization of the large government-owned tea plantations. Because of its colonial origins, government ownership of the tea industry has long had enormous political symbolism. Nonetheless, the plantations, which account for 15 percent of Sri Lanka's foreign earnings, have been costing the government the equivalent of \$12 million per month in local currency. The Sri Lankan Government has responded to the benchmark by contracting with 25 private tea estate companies to manage the estates. Additionally, benchmark to phase out 2 million tonnes of tea, rubber, and coconut were reached, and wheat imports have been liberalized. These policy reforms to rationalize the agricultural sector, associated with the Title III program, will promote food security by increasing rural incomes and employment.

Europe and New Independent States

In Eastern Europe and in the new independent states of the former Soviet Union, the transition to market-driven economic systems continues to be especially difficult for poor people, as changes in marketing and production systems drive up prices for basic foods. An estimated 145 million people — half the total population of the former Soviet Union — lived in poverty in 1991, taking into account the effects of price increases on real purchasing power.

The disruption of centrally planned food production, processing, and marketing imposed serious food shortages in some new independent states. The food shortages in 1991 and 1992 were due not to a dramatic shortfall in production, but rather to the disintegrating economic situation. Dramatic dysfunctions in local, regional, and national marketing and transport systems prevented the timely and efficient distribution of the region's total food supplies; the region's food supply deficit will undoubtedly worsen in the near term if the structural issues in the food supply chain are not addressed.

FOOD FOR PROGRESS PROGRAM: USDA IN THE NEW INDEPENDENT STATES

In November 1991, the U.S. Government announced its first humanitarian aid program to the new independent states of the former Soviet Union. USDA has provided food commodities valued at more than \$200 million targeted through PVOs to the republics of Armenia, Belarus, Kazakhstan, Turkmenistan, Russia, and Georgia. A wide range of innovative programming options were used, including rehabilitation of basic health care services, support and provisioning of "safety-net" soup kitchens, and PVO food distribution to the elderly and to families with children.

In Kazakhstan, U.S. agricultural commodities have been used 1) to promote private sector initiatives to develop democratic processes, and 2) to support a primary health care training program to rehabilitate basic health services, including a three-year maternal and child health program.

In the Russian Federation, the American Jewish Joint Distribution Committee delivered more than 540,000 food packages to individuals who are home-bound and to selected institutions, based on its successful meals on wheels program in the United States. In Belarus, Gallop International targeted 125,000 families in the Chernobyl-Crevent region with help from 50 U.S. volunteers.

FOOD SECURITY AND NUTRITION

The concept of food security presented here — an amalgam of national food self-reliance and household/individual food access and utilization — is related to a complex set of interactions involving health, diet, and poverty and other socioeconomic factors. It incorporates specific concerns such as adequate caloric intake, protein-energy malnutrition, and micronutrient deficiencies, which in turn are influenced by access to potable water, family, maternal and infant health practices, and general health and sanitation services.

A Nutritionally Acceptable Diet

Achieving food security requires that all segments of the population have access to a nutritionally acceptable diet, including adequate minerals, carbohydrates, fats and fatty acids, water, protein, and vitamins. To be nutritionally acceptable, a diet must meet several criteria. First, it must provide enough energy, measured in calories (estimated at 2300 calories per day by A.I.D.), to support normal physical and mental activity. Second, it must include an adequate supply of protein, which is especially important during pregnancy, early childhood, adolescence, and other growth periods. As noted earlier, energy deficiency is the primary dietary inadequacy in developing countries. Usually diets that are acceptable in energy content are also acceptable in protein content. Finally, a proper diet includes a range of micronutrients essential for human growth and maintenance, but required in very small quantities. These include vitamin A, iron, iodine, zinc, calcium, vitamin C, and the B vitamins.

When the intake and balance of these essential nutrients are insufficient, growth and development suffer and the risk of infectious diseases and nutritional disorders increases. The result of an inadequate and improperly balanced diet is *food insecurity*.

Micronutrient Deficiencies

Micronutrients, essential vitamins and minerals needed in very small quantities, have been found to facilitate mental development, to protect against infectious diseases, to increase adults' capacity for physical work, and to improve the lives of mothers and children. Conversely, micronutrient *deficiencies* can cause harm from the moment of conception because of their influence on the regulation of growth and other physiological processes.

Many micronutrients occur in nature in diverse edible forms; where they are not easily obtainable, synthetic or concentrated forms can be made available cost-effectively.

Vitamin A. More than 43 million children — 7 percent of the world's children under the age of five—do not consume enough vitamin A. Nearly 13 million pre-school age children are at risk of being affected by *xerophthalmia*, irreversible eye damage caused by lack of vitamin A. At least 500,000 of these children become either partially or totally blind each year; approximately two thirds of these children die within a few months of losing their sight. A lack of vitamin A and other essential nutrients also makes children more vulnerable to the severe consequences of diseases such as measles, diarrhea, and respiratory infections.

Iron. Approximately 1.3 billion people — 24 percent of the world's population — suffer from iron deficiency anemia. Women of childbearing age and young children are particularly susceptible. About a fifth of an estimated 500,000 maternal deaths during pregnancy and childbirth can be attributed to severe anemia. Infants of anemic mothers have low birth weights and a high risk of dying during the period shortly after birth. Iron deficiency can affect mental development and school performance, and reduce the labor productivity of individuals.

Iodine. Iodine deficiency, which can reduce both physical and mental capacity, affects an estimated 217 million people — 4 percent of the world's population. A billion people live in iodine-deficient areas. The most common symptom is goiter, an enlargement of the thyroid gland in the neck, affecting some 211 million people. About 20 million people suffer from some degree of brain damage caused by iodine deficiency.

Other Micronutrients. A lack of other vitamins and minerals can lead to disease or disorders such as a lack of calcium hindering the proper growth of bones and teeth or a lack of fluoride associated with dental deterioration. More subtle impacts of deficiencies include reduced effectiveness of the immune system. Figure 3 shows the number of people affected by a range of food shortage indicators, including various micronutrient deficiencies.

Figure 3

PROPORTION OF WORLD POPULATION AFFECTED BY VARIOUS FOOD SHORTAGE INDICATORS

Food Shortage Indicator	Number and Percent of Affected Population	Years Measured
Dietary energy supply less than nutritional requirements	1,368 million people 27% world population	1986-88
Dietary energy insufficient for work	1,055 million people 20% world population	1990
Energy insufficient for normal growth of children, minimal activity of adults	477 million people 9% world population	1990
Families reported	107 million people 2% world population	1990
Iron deficiency	1.5 billion people 22% world population	1990
Iodine deficiency	217 million people 4% world population	1990
Infants born underweight	27 million people 4% world population	1990
Children born underweight in developing countries	27 million people 4% world population	1990
Vitamin A deficiency	1.5 billion people 22% world population	1990

Sources: Data from *The State of the World 1990*, World University, World Hunger Program, April 1990.
 Iron deficiency data from S. Gillespie, J. Kevany, and J. Mason, *Controlling Iron Deficiency: State of the Art Series*, United Nations Administrative Committee on Coordination/Sub-Committee on Nutrition, 1991.

REFUGEES AND DISPLACED PERSONS: FOOD EMERGENCIES

In 1991, approximately 20 million people were estimated to be refugees; another 20 million were estimated to be internally displaced within their own countries (see Figure 4). Political and ethnic strife in places as diverse as Myanmar and Mozambique undoubtedly has increased the total still further. In recent years, refugees and displaced persons have been increasing at an annual rate of 10 percent per year.

Figure 4

REFUGEES AND DISPLACED PERSONS, 1991

Recognized refugees	16.7 million
Unregistered refugees	3.1 million
Displaced persons	20.6 million

Source: U.S. Committee for Refugees, cited in *Hunger Among Refugees and Displaced Persons: A Review and Assessment of the Data* (Providence: Brown University, World Hunger Program, 1992).

Refugees and displaced persons are among the most vulnerable of the poor, open to hunger and malnutrition in their flight from violence, political upheaval, or social turmoil. Refugees and displaced persons are often forced to leave their homes, employment, and assets, and families are often disrupted during flight.

Assistance to refugees and displaced persons comes primarily from host countries, although approximately 50 percent of all internationally recognized refugees get aid from international agencies. PVOs and other non-governmental organizations also provide both emergency and development assistance to refugees and displaced persons, often with substantial support and funding from bilateral programs.

Food aid provided to refugees has grown dramatically in recent years, and progress is being made in coordinating and focusing the delivery of food aid to refugee populations. With a greater understanding of the extended rather than emergency nature of many refugee situations, PVOs and development agencies like A.I.D. are developing a more sophisticated and creative approach to refugee and emergency situations.

One important lesson learned during the 1980s is the dramatic difference between coping with an emergency caused by natural disaster (e.g., crop failure from drought or pests) and responding to the needs of refugees displaced by civil war or political persecution, situations in which relief is much harder to achieve. Donors like A.I.D. can respond quickly to disasters caused by drought, pestilence, or other natural causes when governments are stable enough to reach out for assistance to international markets or international donor agencies; when basic marketing and distribution systems are untouched by civil war; and when family and community structures are intact.

In regions like the Horn of Africa, on the other hand, citizens of Somalia, Ethiopia, and Sudan have endured years of suffering caused not only by drought and pestilence but also by the trauma of civil war and political unrest. In these countries, the U.S. Government continues to mobilize a wide range of P.L. 480 resources in order to relieve suffering and anguish, a daunting logistical task in the face of ongoing strife. Such situations show clearly how fragile "food security" really is. In this case, the issue should be temporary because the overall objective is to reintegrate refugees into their native populations.

DROUGHT IN SOUTHERN AFRICA: THE A.I.D. RESPONSE

In late January 1992, A.I.D. began receiving disturbing reports from governments in Southern African countries, with meteorological data indicating dramatically reduced rainfall in crop-producing areas. By February, all A.I.D. missions in the region were feeding back data and estimates of serious shortfalls in basic cereals and coarse grains. In response, A.I.D. worked with PVOs, the World Food Program, and other donors to assemble a uniquely innovative and flexible emergency program in eight Southern African countries.

Although it is too early to evaluate the program's total impact, several elements stand out as unique in the U.S. Government drought emergency response program. First, the governments involved had the institutional capacity to identify the early warning signs and the political stability to reach out to international agencies early in the year. Those governments also had the financial reserves to begin procuring grain regionally and internationally in response to the first supply gaps. Second, A.I.D. and other donors responded very quickly to the warnings of crop shortfalls, coordinating through task forces and committing to food shipments timed for the most hungry season, July through September. Third, governments and donors agreed upon an innovative system of moving the bulk of the emergency food donations through commercial private sector marketing channels, seeking to dramatically increase supplies available in local markets, rather than depending on traditional refugee-style feeding programs. Direct feeding programs have also been established as a "safety net" for those affected most severely by the famine, those without incomes or access to the increased supplies in the market.

This innovative strategy, focused on massive early injections of additional food supplies channeled through existing markets, allows the people affected by the drought, especially the poorest, to remain in their homes and continue to work to improve their lives. It eliminates the dramatic displacement into camps and the rupture of nuclear and extended families that accompanies traditional famine feeding efforts. It also allows governments and the PVOs to focus much earlier on rehabilitation programs for the post-drought period, such as building water wells and delivering seed, etc.

The U.S. Government's response to the Southern Africa drought emergency has involved creative programming innovations, careful coordination and flexible responses, and a massive reprogramming of budgeted food aid resources. More than 1.4 million metric tons of food, valued at more than \$389 million, were allocated after March 1992 in response to early famine warning signals, including more than 234,000 metric tons reprogrammed from Title III resources under the flexible guidelines of the 1990 Agricultural Development and Trade Act.

THE FOOD SECURITY INDEX: ASSESSING THE SITUATION

The 1991 *World Food Day Report* included a detailed presentation of a Food Security Index (FSI), which ranks selected countries according to levels of food security. The Index has been updated, using the latest available data.

This FSI is a composite index using five statistical indicators; where possible, it is based on data averaged over a three-year period (1988-90). The five indicators are used to prepare two sub-indexes. The *National Food Self-Reliance Index*, prepared from data on domestic food production and gross foreign exchange earnings, measures food supply at the national level. The *Household Food Access Index*, prepared from data on per capita gross national product, average daily calorie supply, and child mortality, measures the ability of households to gain access to the food available in their country.

After the raw data for each of the five indicators are assembled and a three-year average is calculated (where only two years of data are available, two-year averages are used), the data are normalized (statistically transformed) and a set of FSI values is created. The result of this statistical analysis, which benefits from data exchange and coordination not only within U.S. Government agencies but also with other donors, is a ranking of countries which allows a country-by-country comparison. The Index illustrates *relative* food security status among developing countries.

As with any index, the numerical values of the FSI are useful *only to position countries in comparison with each other*. FSI numerical values have no independent meaning. However, the index distinguishes the most food-insecure countries from those that are relatively food-secure. By identifying those countries with the most dramatic food insecurity, the FSI helps A.I.D. target new or expanded P.L. 480 programming efforts.

Figure 5 presents the 93 countries in the FSI ranking in a *descending order of food security*; that is, the relatively food-secure countries are at the top of the chart and the relatively food-insecure countries are at the bottom. Figure 6 presents data for the five indicators which feed into the Household Food Access Index and the National Food Self-Reliance Index, categorized by region. The aggregate FSI rank for each country is also presented. Figure 7 groups countries by their relative food security. In addition to the 93 countries with FSI rankings, Figure 7 includes 19 additional countries receiving P.L. 480 food aid for which data are not available to calculate the Food Security Index.

The *Most Food-Insecure Countries* do not have the capacity to produce adequate food supplies or to import them on commercial terms, and many households within food-insecure countries do not have access to the food which is available.

These 55 countries, as shown in Figure 7, include more than 1.7 billion people, or 33 percent of the world's population. A number of the most food-insecure countries have suffered years of prolonged food insecurity, often compounded by years of disruption or strife: Angola, Bangladesh, Central African Republic, Chad, Ethiopia, Guinea, Haiti, Malawi, Mozambique, Rwanda, Sierra Leone, Somalia, Sudan, and Yemen. The vast majority of food-insecure countries are in Africa.

Relatively Food-Secure Countries are more self-reliant in their capacity to supply food at the national level, and their households have better access to the food that is available in-country. The 41 countries in this group (see Figure 7) contain 2.1 billion people, or about 40 percent of the world's population. Only 4 of these countries are in Africa and 4 in Asia; the majority are in the Near East, Europe, and Latin America.

There are 16 "*Borderline*" Countries that are not clearly members of either the most food-insecure group or the relatively food-secure group. These 16 "borderline" countries (Figure 7) have 409 million people, about 8 percent of the world's population.

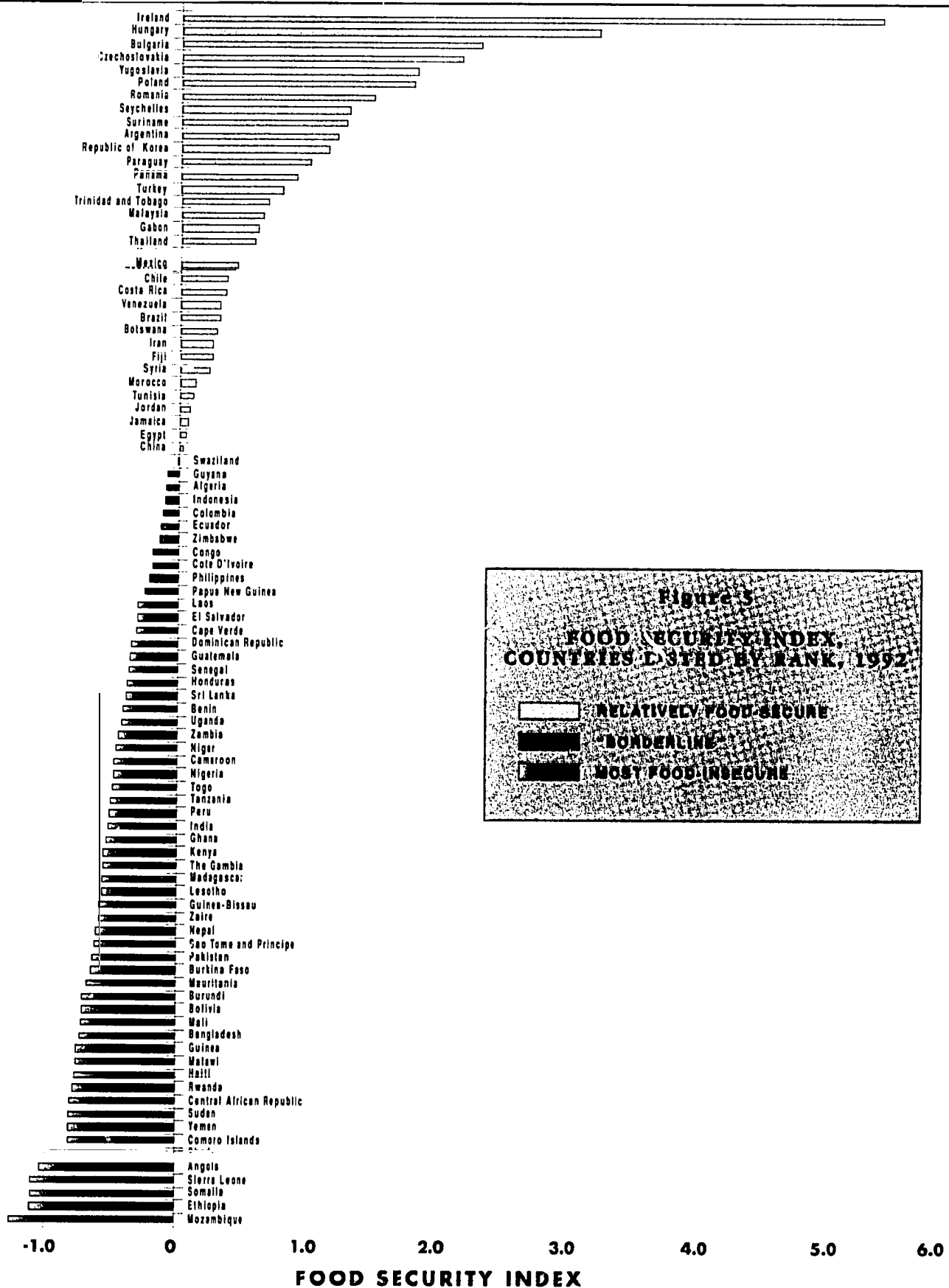


Figure 6
THE 1992
FOOD ACCESS INDEX
(1 of 2)

	Household Food Access Index					National Food Self-Reliance Index			
	per capita GNP (\$/year)	per capita calorie intake (kcal/day)	under 5 mortality rate (deaths/1000 live births)	Household Food Access Rank	1992 Food Security Index Rank	FSI value	gross foreign exchange earnings per capita (\$/yr)	gross domestic food production per capita (kg wheat equiv/yr)	National Food Self-reliance Rank
AFRICA									
ANGOLA	590	1803	292	2	5	-1.039	342	115	18
BENIN	340	2294	161	31	40	-0.420	100	292	55
BOTSWANA	1617	2374	88	56	69	0.292	1721	80	76
BURKINA FASO	313	2286	231	15	20	-0.650	57	261	37
BURUNDI	223	1958	192	11	18	-0.713	24	257	36
CAMEROON	987	2210	150	38	36	-0.481	201	192	27
CAPE VERDE	837	2714	68	60	46	-0.314	293	82	8
CENTRAL AFRICAN REPUBLIC	380	2022	204	12	10	-0.811	74	181	17
CHAD	190	1792	219	5	6	-0.949	44	187	16
COMORO ISLANDS	463	1927	145	24	7	-0.822	104	112	4
CONGO	970	2602	112	53	52	-0.199	497	155	38
COTE D'IVOIRE	803	2577	139	46	51	-0.202	300	251	59
ETHIOPIA	120	1663	235	3	2	-1.112	17	151	7
GABON	3260	2452	167	61	77	0.596	1807	189	79
THE GAMBIA	317	2359	241	16	28	-0.565	213	266	56
GHANA	390	2244	143	35	30	-0.541	79	216	25
GUINEA	410	2167	242	9	14	-0.759	144	207	28
GUINEA-BISSAU	177	2475	240	18	25	-0.594	18	286	42
KENYA	370	2154	111	37	29	-0.564	94	181	20
LESOTHO	480	2320	132	39	26	-0.568	296	113	15
MADAGASCAR	230	2143	180	20	27	-0.567	46	282	44
MALAWI	177	2120	258	6	13	-0.760	58	271	39
MALI	263	2287	288	7	16	-0.726	61	287	51
MAURITANIA	490	2641	217	34	19	-0.684	260	96	11
MAURITIUS	2097	2846	29	79	74	0.420	1531	11	70
MOZAMBIQUE	90	1676	297	1	1	-1.274	24	131	3
NIGER	300	2304	225	17	37	-0.469	53	352	64
NIGERIA	287	2302	170	29	35	-0.482	91	274	47
RWANDA	320	1965	202	10	11	-0.785	27	220	23
SAO TOME and PRINCIPE	443	2403	73	47	22	-0.629	87	52	1
SENEGAL	673	2372	170	36	43	-0.365	198	271	57
SEYCHELLES	4260	2342	21	85	86	1.311	3210	5	85
SIERRA LEONE	230	1831	261	4	4	-1.101	42	142	6
SOMALIA	127	1913	218	8	3	-1.103	10	91	2
SUDAN	463	2019	176	19	9	-0.817	41	149	10
SWAZILAND	800	2631	170	42	59	-0.015	941	215	75
TANZANIA	140	2196	173	23	33	-0.507	31	308	54
TOGO	310	2175	150	30	34	-0.488	156	247	40
UGANDA	243	2153	167	25	39	-0.422	24	350	62
ZAIRE	230	2031	133	27	24	-0.594	65	230	29
ZAMBIA	370	2069	125	32	38	-0.451	175	254	49
ZIMBABWE	670	2300	97	44	53	-0.139	209	321	66

Notes: Low Food Security Index rank numbers indicate less food-secure status.
1992 Food Security Index values and rankings calculated by A.I.D./CDIE based on data from UNICEF, World Bank, UNDP, and A.I.D. data sources.
Values for "Gross Foreign Exchange" for Zimbabwe, Zaire, Cote d'Ivoire, and Somalia were calculated as GFX=Exports; no data available on transfers.

Figure 6
THE 1992
FOOD ACCESS INDEX
(2 of 2)

	Household Food Access Index					National Food Self-Reliance Index			
	per capita GNP (\$/year)	per capita calorie intake (kcal/day)	under 5 mortality rate (deaths/1000 live births)	Household Food Access Rank	1992 Food Security Index Rank	FSI value	gross foreign exchange earnings per capita (\$/yr)	gross domestic food production per capita (kg wheat equiv/yr)	National Food Self-reliance Rank
ASIA									
BANGLADESH	193	2011	184	13	15	-0.732	24	229	24
CHINA	353	2638	43	58	60	0.032	47	354	65
FIJI	1687	2886	32	75	67	0.257	1091	58	61
INDIA	350	2222	145	33	31	-0.525	28	248	33
INDONESIA	523	2740	105	54	56	-0.103	146	296	60
REPUBLIC OF KOREA	4467	2863	31	88	83	1.144	1787	182	78
LAOS	230	2605	156	40	48	-0.305	24	319	58
MALAYSIA	2123	2769	30	77	78	0.635	1698	100	77
NEPAL	177	2081	193	14	23	-0.621	26	289	45
PAKISTAN	380	2209	162	28	21	-0.644	75	190	21
PAPUA NEW GUINEA	863	2408	81	51	49	-0.257	420	151	34
PHILIPPINES	677	2357	71	49	50	-0.221	208	237	41
SRI LANKA	440	2307	38	52	41	-0.394	145	145	12
THAILAND	1223	2317	39	59	76	0.575	483	537	80
EUROPE									
ALGERIA	2467	2834	102	72	57	-0.093	454	68	13
BULGARIA	2663	3690	18	91	91	2.317	1037	976	91
CZECHOSLOVAKIA	3327	3646	14	92	90	2.167	1092	836	90
HUNGARY	2627	3616	17	89	92	3.227	1180	1456	92
IRELAND	9057	3774	10	93	93	5.401	7150	634	93
POLAND	1810	3492	18	86	88	1.796	581	901	89
ROMANIA	1670	3205	32	81	87	1.494	441	850	87
YUGOSLAVIA	2903	3623	26	90	89	1.819	1125	683	88
NEAR EAST									
EGYPT	637	3332	101	65	61	0.058	237	238	50
IRAN	2720	3176	71	82	68	0.260	187	214	35
JORDAN	1697	2703	55	67	63	0.092	1048	39	52
MOROCCO	887	3024	116	62	65	0.134	292	323	69
SYRIA	987	3058	62	69	66	0.236	338	292	67
TUNISIA	1317	3100	70	73	64	0.115	667	120	43
TURKEY	1430	3193	88	74	80	0.795	399	559	81
YEMEN	545	2141	190	22	8	-0.818	234	86	5
LATIN AMERICA/ CARIBBEAN									
ARGENTINA	2373	3103	36	83	84	1.210	403	679	83
BOLIVIA	630	1949	166	21	17	-0.717	126	172	19
BRAZIL	2373	2736	84	71	70	0.320	254	351	72
CHILE	1743	2565	27	70	73	0.366	746	257	74
COLOMBIA	1243	2584	56	63	55	-0.119	278	176	30
COSTA RICA	1780	2804	22	76	72	0.358	706	211	68
DOMINICAN REPUBLIC	787	2358	80	48	45	-0.350	335	134	22
ECUADOR	1023	2526	85	55	54	-0.137	292	222	46
EL SALVADOR	1043	2325	87	50	47	-0.307	234	181	26
GUATEMALA	907	2229	97	45	44	-0.363	181	202	32
GUYANA	400	2737	72	57	58	-0.087	316	231	53
HAITI	363	2007	145	26	12	-0.768	58	145	9
HONDURAS	713	2246	98	43	42	-0.386	221	191	31
JAMAICA	1340	2624	21	66	62	0.071	983	44	48
MEXICO	2113	3057	56	80	75	0.449	449	297	71
PANAMA	1800	2543	33	68	81	0.906	2030	231	82
PARAGUAY	1040	2757	61	64	82	1.001	384	753	86
PERU	1037	2217	119	41	32	-0.510	199	136	14
SURINAME	2940	2934	39	84	85	1.281	1106	533	84
TRINIDAD AND TOBAGO	3553	2877	19	87	79	0.682	1620	16	73
VENEZUELA	2717	2660	44	78	71	0.320	865	137	63

Figure 7

FOOD SECURITY COUNTRY GROUPINGS

MOST FOOD-INSECURE

• AFGHANISTAN
 • ALBANIA
 ANGOLA
 BANGLADESH
 BENIN
 • BHUTAN
 BOLIVIA
 BURKINA FASO
 BURUNDI
 • CAMBODIA
 CAMEROON
 CAPE VERDE
 CENTRAL AFRICAN REPUBLIC
 CHAD
 COMORO ISLANDS
 DOMINICAN REPUBLIC
 EL SALVADOR
 ETHIOPIA
 THE GAMBIA
 GHANA
 GUATEMALA
 GUINEA
 GUINEA-BISSAU
 HAITI
 HONDURAS
 INDIA
 KENYA
 LAOS
 LESOTHO
 • LIBERIA
 MADAGASCAR
 MALAWI
 MALI
 MAURITANIA
 MOZAMBIQUE
 • NAMIBIA
 NEPAL
 • NICARAGUA
 NIGER
 NIGERIA
 PAKISTAN
 PERU
 RWANDA
 SAGITONIA AND PANGI
 SENEGAL
 SIERRA LEONE
 SOMALIA
 SWAZILAND
 SUDAN
 TANZANIA
 TOGO
 UGANDA
 YEMEN
 ZAMBIA

"BORDERLINE"

ALGERIA
 COLOMBIA
 CONGO
 COTE D'IVOIRE
 ECUADOR
 • GAZA
 GUYANA
 INDONESIA
 • IRAQ
 • LEBANON
 • MYANMAR
 PAPUA NEW GUINEA
 PHILIPPINES
 SWAZILAND
 • WEST BANK
 ZIMBABWE

RELATIVELY FOOD-SECURE

ARGENTINA
 • ARMENIA
 BOTSWANA
 BRAZIL
 BULGARIA
 • BYELARUS
 CHILE
 CHINA
 COSTA RICA
 CZECHOSLOVAKIA
 EGYPT
 • ESTONIA
 FIJI
 GABON
 HUNGARY
 IRAN
 IRELAND
 JAMAICA
 JORDAN
 KOREA, REPUBLIC OF
 • LATVIA
 • LITHUANIA
 MALAYSIA
 MAURITIUS
 MEXICO
 MOROCCO
 PANAMA
 PARAGUAY
 POLAND
 ROMANIA
 • RUSSIA
 SEYCHELLES
 SURINAME
 SYRIA
 THAILAND
 TRINIDAD AND TOBAGO
 TUNISIA
 TURKEY
 TURKMENISTAN
 VENEZUELA
 YUGOSLAVIA

One of 19 countries receiving U.S. food aid to which data are unavailable for one or more of the food security indicators were placed in the "BORDERLINE" group. In order to maintain a complete profile of food security in countries receiving U.S. food assistance, each of these countries was placed in one of the three groups in an ad hoc manner, based on the data and indicators which were available. Thus, Figure 7 includes a total of 112 countries.

Nutritional Status in Countries Receiving P.L. 480 Food

The ultimate goal of efforts to enhance food security is to reduce malnutrition. Improved household food security is an important element of this fight against world hunger. This requires understanding the complex factors that contribute to hunger and utilizing appropriate tools to assess nutritional status.

National statistics which may be helpful in examining food security, such as per capita income and calorie supply data, are not accurate predictors of nutritional deficits, although food security and nutrition are closely related. Because national averages can mask large gaps in food access among households, or within a household among members, large sectors of a relatively food-secure population may have an inadequate diet with sub-standard levels of calories, proteins, and micronutrients.

A.I.D.'s use of P.L. 480 resources is designed to assist the vulnerable sections of a country's population and the most vulnerable family members in poor families — mothers, infants, and young children. This involves not only improving food access and household food security but also targeting efforts to improve nutritional status among the poor.

The most commonly used method for assessing the overall nutritional status of a country's population is through measures of child nutrition. Childhood nutritional deficiencies not only contribute to more than 60 percent of child deaths in developing countries, but also inhibit the full growth and development of the world's future workers, thus impairing optimal economic development.

The most common measures of child nutrition are comparisons between the physical growth of malnourished children and a reference population of children of the same age in a healthy, well-nourished population. The World Health Organization (WHO), the United Nation's Children's Fund (UNICEF), and A.I.D. use the following measures:

low weight for age (underweight), a composite of *acute and chronic* malnutrition, the most common indicator now available across countries;

low weight for height (wasting), a measure of *acute* malnutrition often associated with the rapid onset of food shortages; and

low height for age (stunting), a measure of *chronic* malnutrition and of linear growth failure resulting from prolonged malnutrition over a longer period of time.

Although poor access to food is only one of several factors contributing to malnutrition, countries with the highest levels of childhood malnutrition are often the countries with the most food-insecure households on the FSI. Figure 8 shows that countries that rank low on the Household Food Access Index may be more likely to have large proportions of their children underweight.

A.I.D. often collects nutritional data for its own child survival and maternal and child feeding projects under P.L. 480, but data on the nutritional status of countries as a whole are less readily available. A.I.D. is working in cooperation with other international donors and partner governments to improve the quality of nutrition data in developing countries as an integral part of the fight against hunger. Annex A presents a summary of the latest available estimates of countries' levels of malnutrition.

Figure 8

RELATIONSHIP BETWEEN HOUSEHOLD FOOD ACCESS RANKING AND PERCENT OF UNDERWEIGHT CHILDREN FOR SELECTED COUNTRIES

COUNTRY	HOUSEHOLD FOOD ACCESS RANK	PERCENT OF UNDERWEIGHT CHILDREN
Most Food-Insecure		
MALI	7	40.4
BANGLADESH	13	78.8
NIGER	17	12.0
BOLIVIA	21	19.0
UGANDA	25	31.8
PAKISTAN	28	16.0
TOGO	30	33.5
ZAMBIA	32	30.9
GHANA	35	38.4
SENEGAL	36	27.7
GUATEMALA	45	44.4
DOMINICAN REPUBLIC	48	12.7
EL SALVADOR	50	23.0
SRI LANKA	52	42.5

Average ----- 31.4%

"Borderline"

ZIMBABWE	44	15.1
COTE D'IVOIRE	46	19.8
PHILIPPINES	49	38.8
CONGO	53	31.3
ECUADOR	55	23.9
COLOMBIA	63	13.8

Average ----- 23.7%

Relatively Food-Secure

MOROCCO	62	20.0
EGYPT	65	16.8
BRAZIL	71	8.6
TUNISIA	73	11.8

Average ----- 14.3%

Note: Only countries with national-level surveys conducted since 1986 of prevalence of underweight children ages 12-23 months are included.

Sources: Household Food Access Rankings from Figure 6. Data on underweight children from Annex A.

Although these figures shed light on the degree of malnutrition and food insecurity in a country, they cannot explain the degree to which overall nutritional status results from infectious disease, inadequate maternal and child health care, insufficient household income, micronutrient deficiencies, or a combination of these factors. The spectrum of multi-sectoral health, nutrition, and development activities funded by A.I.D., including through P.L. 480 and other donors as well as developing country self-help efforts, is essential in combatting the many factors that contribute to hunger and malnutrition.

U.S. GOVERNMENT INTERVENTIONS TO IMPROVE FOOD SECURITY

The U.S. Government and the American people are committed to using the agricultural abundance of American farms to fight hunger and malnutrition in developing countries and to improve the food security of poor people in them.

As illustrated in Figure 9, the majority of the 1992 food aid was focused on the most food-insecure countries, with some 76.6 percent of food aid being directed to 62 food-insecure and "borderline" countries containing 2.1 billion people.

Figure 9
P.L. 480 FOOD AID ALLOCATIONS, FY 1992 (million \$s)

	Title I	Title II	Title III	Section 416(b)	Total	% of Total
Food-Insecure	92.4	683.2	330.4	298.0	1,414.2	66.8%
"Borderline"	82.5	53.2	—	71.6	207.3	9.8%
Food-Secure	312.9	52.2	—	139.9	505.0	23.4%
TOTAL	487.8	788.8	330.4	509.5	2,116.5	100%

In pursuit of enhanced food security in the fight against world hunger and malnutrition, the U.S. Government uses food aid and other development resources to attack the many factors contributing to nutritional risk. Food aid programming contributes to improved nutritional status in many ways. Some examples include:

1. Title II maternal and child health and school feeding projects, managed by PVOs, provide supplementary food rations as well as primary health care advice and information;
2. Local currency funds generated by Title III support national and regional health and nutrition projects, including specific interventions targeted at women and children;

3. Title II food for work programs, implemented by PVOs, provide food rations in exchange for work contributions to community development and infrastructure projects;
4. Direct feeding and emergency assistance programs supported through Title II help provide a "safety net" for the poorest and the most vulnerable, including refugees and displaced persons;
5. Resources generated by Title III commodity sales are used by A.I.D. and partner governments to support sectoral and macroeconomic policy measures that improve the general economic context and provide incentives leading to increased incomes, employment, and local production;
6. A.I.D. field missions, working with partner governments and PVOs, use Title III-generated local currencies to support projects with a targeted impact on poor households, both rural and urban;
7. Title I food resources add to the total food availability in recipient countries and help support the development of stable, market-oriented economies which will grow to be active international trading partners with the United States; and
8. Sales of Title I and Title III commodities, and Title II food which is monetized, are channeled as much as possible through the emerging private markets in recipient countries, supporting the growth of a more robust private sector as the engine for growth.

P.L. 480 Title II: Emergency and Private Assistance Programs

Under Title II, managed by A.I.D., the U.S. Government donates agricultural commodities to support emergency and non-emergency ("regular") food aid programs. In many cases, food is distributed directly to individuals, through direct relief, emergency feeding, and disaster assistance programs. In other cases, food is combined with other program elements and targeted to certain beneficiary groups, such as in maternal and child health, school feeding, and food for work programs. In still other programs, P.L. 480 commodities are imported and sold on the local market ("monetized"), providing an additional supply of food locally and generating local currencies which are then used to support local development efforts and community projects. In FY 1992, A.I.D. provided developing countries with \$788.8 million of Title II food aid.

PVOs and cooperative development organizations (CDOs) play a central role in A.I.D.'s efforts to distribute Title II food aid. In FY 1992, PVOs and CDOs received over 1,992 million tons of P.L. 480 commodities for distribution in programs directly benefitting more than 63 million people. This included maternal and child health programs in 29 countries, school feeding programs in 14 countries, food for work programs in 21 countries, and emergency or disaster assistance in 12 countries. In addition to programs implemented by PVOs, the U.S. contributed Title II commodities to the World Food Program for activities in 52 countries.

P.L. 480 Title III: Food for Development

The Title III program under P.L. 480, managed by A.I.D., was dramatically redesigned in the 1990 authorizing legislation. The new all-grant program was to be used in innovative ways and to be integrated into the overall development strategy of A.I.D. missions at the country level. Title III resources are especially intended to benefit the poorest countries, and thus several specific criteria were established in Section 302 to define the "least developed countries" that may benefit from Title III. For FY 1992, 56 countries were identified as "least developed" and thus eligible for Title III food; 36 in Africa, 14 in Asia and the Near East, and 6 in Latin America and the Caribbean.

In countries meeting minimum legislated eligibility criteria where Title III grant food aid would be an appropriate and useful resource, A.I.D. missions are encouraged to develop a multi-year program which is well-integrated into the mission's country program strategy, taking advantage of the many innovative options allowed in the legislation. Special emphasis is given to supporting the fragile and emerging private sector marketing systems in partner countries and on identifying opportunities for targeting child survival, environmental and natural resource issues through Title III resources.

Fourteen Title III agreements for 1.5 million metric tons of food, valued at approximately \$330.4 million, were in operation in 1992.

P.L. 480 Title I: Trade and Development Assistance

Title I of P.L. 480 focuses on the market development aspects of the U.S. food aid program. FY 1992 was the first full year of food aid operations under the new management structure outlined in the 1990 legislation. The USDA has assumed full management of the Title I concessional loan program, under which countries pay for commodities in U.S. dollars at concessional interest rates with a maximum 30-year loan term and a maximum grace period of 7 years. On an exceptional basis, the Secretary of Agriculture may choose to accept repayments of loans in local currencies, which may in turn be used in the recipient country to support activities that promote agricultural development and trade.

By investing in agriculture, trade promotion, and public infrastructure, and by assisting countries with temporary foreign exchange constraints in participating in international markets, USDA uses Title I programs to help countries meet their long-term food security requirements. Priority is given to countries that demonstrate the greatest need for food; that undertake economic reforms to promote food security, alleviate poverty, and promote development; and that have the demonstrated potential to become commercial markets for competitively priced U.S. commodities in the future.

A feature of special interest in the FY 1992 USDA-managed Title I program is USDA's flexible response to food needs in the new independent states of the former Soviet Union. Also of interest is USDA's success in focusing on private sector marketing channels; more than 30 percent of the food provided under FY 1992 Title I agreements was imported and distributed entirely by private sector merchants. In FY 1992, USDA initiated agreements resulting in 28 Title I country programs totalling 2.8 million metric tons of food valued at \$487.8 million.

Section 416(b)

Under the continuing program guidelines of Section 416(b) of the Agricultural Act of 1949, the United States donates surplus agricultural commodities owned by the Commodities Credit Corporation (CCC) to developing countries and friendly nations. In addition to filling commodity gaps in emergency situations, Section 416(b) food is used to relieve temporary commodity shortfalls. USDA assumed management of these activities in FY 1992; during this year, approximately 1.35 million metric tons of food, valued at \$509.5 million, were provided under Section 416(b). A special feature was the active involvement of USDA under Section 416(b) in providing commodities to the coordinated response to the drought emergency in Southern Africa.

CONCLUSION

Although there are more hungry people today than ever before, fueled by population growth in very poor countries, the *proportion* of the world's population that lives in hunger is slowly declining. By using the resources of the newly redesigned P.L. 480 program, the United States not only provides food directly to the poorest of the world's poor but also mobilizes resources to attack the *causes* of poverty. Through P.L. 480 programs, the U.S. supports development initiatives designed to interrupt the cycle of poverty and hunger and to generate equitable, broad-based economic growth that can combat food insecurity.

In passing the 1990 Agricultural Development and Trade Act, Congress provided several new and innovative mechanisms that enable us to respond flexibly to the numerous challenges around the world. Mobilizing volunteer programs to distribute food to vulnerable groups in the newly independent states of the former Soviet Union; injecting massive amounts of additional food into the existing private markets in Southern Africa to prevent the tragic displacement of starving refugees; using food shipments to smooth the way for policy reforms which can energize the economic transformation of a developing economy — these are just some of the creative and flexible ways the P.L. 480 program uses food assistance to defeat world hunger.

ANNEX A

MALNUTRITION AND HUMAN DEVELOPMENT STATUS IN SELECTED COUNTRIES RECEIVING U.S. FOOD AID

	Percent of Children Who are Underweight (12-23 months unless otherwise noted)		Human Development Index (HDI) 1992
	Percent Malnourished	Year of Survey	(low HDI *s = less developed)
AFRICA			
• Angola	n/a	—	0.169
• Benin	35.0	1987	0.111
• Botswana	15.0	1987	0.534
• Burkina Faso	45.5	1987	0.074
• Cameroon	25.5	1977	0.313
• Cape Verde	19.1	1985	0.437
• Central African Republic	39.4	1972	0.159
• Chad	34.3	1987	0.088
• Comoro Islands	n/a	—	0.269
• Congo	31.3	1987	0.372
• Cote d'Ivoire	19.8	1986	0.289
• Ethiopia	53.8	1982	0.173
• Gambia	18.8	1982	0.083
• Ghana	38.4	1988	0.310
• Guinea	n/a	—	0.052
• Guinea-Bissau	30.8	1978	0.088
• Kenya	20.5	1982	0.866
• Lesotho	13.2	1981	0.423
• Liberia	20.3	1976	0.227
• Madagascar	55.5	1984	0.325
• Malawi	29.7	1981	0.166
• Mali	40.4	1987	0.081
• Mauritania	42.4	1981	0.141
• Mauritius	23.9	1985	0.793
• Mozambique	27.0	1978	0.153
• Niger	12.0	1989	0.078
• Sao Tome and Principe	17.0	1986	0.374
• Senegal	27.7	1986	0.178
• Sierra Leone	38.2	1977	0.062
• Somalia	54.1	1975	0.088
• Sudan	55.2	1983	0.157
• Togo	33.5	1988	0.218
• Uganda	31.8	1989	0.192
• Zambia	30.9	1990	0.315
• Zimbabwe	15.1	1988	0.397

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	Percent of Children Who are Underweight (12-23 months unless otherwise noted)		Human Development Index (HDI) 1992
	Percent Malnourished	Year of Survey	(low HDI #s = less developed)
ASIA			
Afghanistan	n/a	—	0.065
Bangladesh	78.8	1989	0.185
Bhutan	n/a	—	0.146
Cambodia	n/a	—	0.178
• India	63.7	1987	0.297
• Indonesia	51.3	1987	0.491
Laos	n/a	—	0.240
Nepal	79.0	1975	0.168
Pakistan	16.0	1987	0.305
Philippines	38.8	1989	0.600
Sri Lanka	42.5	1987	0.651
EUROPE AND NEAR EAST			
Albania	n/a	—	0.791
Bulgaria	n/a	—	0.865
Egypt	16.8	1988	0.385
• Jordan	17.7	1975	0.586
• Lebanon	3.0	1986	0.561
Morocco	20.0	1987	0.429
Poland	n/a	—	0.874
Romania	n/a	—	0.733
Tunisia	11.9	1988	0.582
Yemen	65.8	1979	0.232
LATIN AMERICA AND CARIBBEAN			
Bolivia	19.0	1989	0.394
Brazil	8.6	1987	0.739
Colombia	13.8	1986	0.758
Costa Rica	6.6	1982	0.842
Dominican Republic	12.7	1986	0.595
Ecuador	23.9	1987	0.641
El Salvador	23.0	1988	0.498
Guatemala	44.4	1987	0.485
Guyana	25.0	1981	0.539
• Haiti	37.4	1978	0.276
• Honduras	20.6	1987	0.473
Jamaica	9.2	1989	0.722
• Mexico	13.9	1988	0.804
Nicaragua	9.9	1982	0.496
Panama	17.1	1980	0.731
Peru	22.0	1984	0.600
Suriname	n/a	—	0.749

Sources: * Data are for different age ranges, since data for only 12-23 months not available. These data from UNICEF, *State of the World's Children, 1992* (New York: Oxford University Press, 1992) and from "Global Indicators of Nutritional Risk," World Bank, Washington, DC (forthcoming 1992).

Unless otherwise noted, data for underweight children are from the database of the Center for International Health Information (CIHI), A.I.D./ISTI, 1601 N. Kent Street, Arlington, VA 22209 USA. HDI data are from United Nations Development Program (UNDP), *Human Development Report, 1992* (New York: Oxford University Press, 1992). The HDI is designed to compare countries' relative development status with more "depth" than per capita GNP/GDP figures allow.

Annex B

P.L. 480 MICRO-PROFILES, BY COUNTRY, FY 1992

AFRICA

- Angola** The *Title II* program provided 33,984 metric tons of food (corn, beans, vegetable oil, and cornmeal), valued at \$17,380,700. This food aid was provided through CARE, Catholic Relief Services, the World Food program, and World Vision Relief and Development in direct feeding and refugee assistance programs; it benefitted more than 948,800 Angolans.
- The *Section 416(b)* program provided 20,000 metric tons of food valued at \$8,725,000.
- Benin** The *Title II* program provided 3,766 metric tons of food (cornmeal, vegetable oil, and wheat-soy blend), valued at \$1,582,400. Catholic Relief Services managed these programs, which included maternal and child health and school feeding programs and benefitted more than 57,000 Beninoise.
- Botswana** The *Title II* program provided 4,368 metric tons of sorghum and vegetable oil, valued at \$1,354,300. The World Food Program managed these maternal and child health programs benefitting more than 488,300 Botswanans.
- Burkina Faso** The *Title II* program provided 30,389 metric tons of food (cornmeal, vegetable oil, wheat, beans, rice, sorghum, and nonfat dried milk), valued at \$11,750,900. Catholic Relief Services and the World Food Program managed these food assistance programs, which included food for work, maternal and child health, and school feeding programs and benefitted more than 340,000 Burkinans.
- Cameroon** The *Title II* program provided 116 metric tons of vegetable oil, valued at \$106,600. The World Food Program managed this food for work program with 6,900 beneficiaries.
- Cape Verde** The *Title II* program provided 14,210 metric tons of corn, valued at \$3,560,900. American Cooperative Development International managed the monetization of this food to support local development activities.
- Central African Republic** The *Title II* program provided 3,766 metric tons of cornmeal, valued at \$654,400. The World Food Program managed this food for work program benefitting more than 45,700 people.
- Chad** The *Title II* program provided 2,370 metric tons of rice, sorghum grits, and corn-soya blend, valued at \$1,198,600. The World Food Program managed this food for work program benefitting more than 68,000 people.
- Comoro Islands** The *Title II* program provided 775 metric tons of rice and vegetable oil, valued at \$414,700. The World Food Program managed this food for work program benefitting more than 50,000 people.

- Congo** The *Title I* program provided 6,300 metric tons of rice, valued at \$2,000,000. Local currencies will support development projects, and the commodities will be marketed and transported by competitive private sector marketers.
- The *Title II* program provided 805 metric tons of rice and vegetable oil, valued at \$408,300. The World Food Program managed this food for work program benefitting more than 37,500 people.
- Cote d'Ivoire** The *Title I* program provided 17,000 metric tons of rice, valued at \$5,000,000, which will generate local currencies for agricultural research and extension programs and provide support for agriculture sector liberalization.
- The *Title II* program provided 1,500 metric tons of rice, valued at \$741,000. The World Food Program managed this food for work program benefitting approximately 250,000 people.
- Ethiopia** The *Title II* program provided 293,428 metric tons of food (vegetable oil, wheat, corn-soy blend, lentils, sorghum, corn-soy milk, bulgur, beans, and rice), valued at \$129,222,500. More than 12 million Ethiopians benefitted from this assistance, provided through refugee support, direct feeding, maternal and child health, and food for work programs. The programs were managed by international PVOs, including the American Jewish-Joint Distribution Committee, CARE, Catholic Relief Services, Food for the Hungry International, Save the Children Foundation, World Vision Relief and Development, and the International Committee of the Red Cross.
- The *Title III* program is a three-year program approved in FY 1992, with \$15 million allocated for FY 1992. It supports sustainable food security through changing from general food subsidies to a targeted "safety net"; expanding the role of private traders and entrepreneurs; and expanding industrial capacity to increase post-war employment.
- The *Section 416(b)* program provided 17,500 metric tons of food, valued at \$9,144,600.
- The Gambia** The *Title II* program provided 8,094 metric tons of corn-soy blend, rice, and nonfat dried milk, valued at \$3,789,600, to more than 70,800 Gambians. Catholic Relief Services and the World Food Program managed these activities including maternal and child health programs and food for work programs.
- Ghana** The *Title II* program provided 38,874 metric tons of food (rice, soy-fortified bulgur, wheat-soy blend, wheat, soy-fortified grits, wheat-soy milk, and soy-fortified sorghum grits), valued at \$10,488,400. PVOs involved in managing these food programs included Adventist Development and Relief Agency (ADRA), Catholic Relief Services, the World Food Program, and Technoserv. The programs included food for work, school feeding, and maternal and child health and benefitted more than 214,100 Ghanaians. Over two thirds of the commodities provided under this program are monetized and local currencies are used for development activities.
- The *Title III* program is a three-year program providing \$7 million in FY 1992 to promote increased agricultural marketing, particularly in export crops. The program supports policy reforms to restructure government expenditures on infrastructure to ensure rural road maintenance.

- Guinea** The *Title II* program provided 2,150 metric tons of rice and corn-soya blend, valued at \$1,058,800. The World Food Program managed this food for work program benefitting more than 42,000 Guineans.
- The *Title III* program provided 20,415 metric tons of rice valued at \$8 million for FY 1992, the first year of a multi-year program designed to support land tenure policy reform. An innovative auction sales mechanism is used to distribute the rice through private sector market channels.
- Guinea-Bissau** The *Title II* program provided 1,550 metric tons of vegetable oil and wheat flour, valued at \$725,000, through a monetization program managed by AFRICARE to support local development activities and through a food for work program managed by the World Food Program.
- Kenya** The *Title II* program provided 25,300 metric tons of food (vegetable oil, wheat, corn-soy milk, and nonfat dried milk), valued at \$10,082,200. Catholic Relief Services, Food for the Hungry International, UNICEF, and World Vision Relief and Development managed a range of programs, including food for work and maternal and child health, that benefitted more than 353,200 people. Nearly half the commodities are monetized and the resultant local currencies are used to enhance the development impact of feeding programs.
- The *Section 416(b)* program provided 44,500 metric tons of food, valued at \$13,895,000.
- Lesotho** The *Title II* program provided 8,114 metric tons of cornmeal and vegetable oil, valued at \$3,864,000. The World Food Program managed this food for work program benefitting some 43,000 people.
- The *Section 416(b)* program provided 5,000 metric tons of food, valued at \$1,590,000.
- Liberia** The *Title II* program provided 21,802 metric tons of food (corn-soy milk, beans, rice, and vegetable oil), valued at \$12,375,400. Catholic Relief Services managed a range of direct feeding and refugee programs benefitting some 1.3 million people. In addition, 67,530 metric tons of food, valued at \$38,912,100, was provided through the World Food Program to Liberia directly and for Liberian and Sierra Leonean refugees and displaced persons in Sierra Leone, Guinea, and Cote d'Ivoire, benefitting more than 4.3 million people.
- Madagascar** The *Title II* program provided 6,916 metric tons of rice, corn-soy milk, and vegetable oil, valued at \$4,033,100. Catholic Relief Services managed these programs, which included school feeding, maternal and child health, and food for work and benefitted more than 163,000 Malagas people.
- The *Section 416(b)* program provided 25,500 metric tons of food, valued at \$12,062,000.
- Malawi** The *Title II* program provided 45,000 metric tons of corn, valued at \$12,200,000 for direct relief programs benefitting more than 4 million people.
- The *Section 416(b)* program provided 238,000 metric tons of food, valued at \$96,224,000.

- Mali** The *Title II* program provided 1,231 metric tons of corn-soy blend and vegetable oil, valued at \$1,008,400. World Vision Relief and Development and the World Food Program managed a range of activities, including food for work and maternal and child health programs, benefitting more than 129,000 Malians.
- The *Title III* program is in the last year of a multi-year program valued at \$6 million. Together with its predecessor, Title II Section 206, it has been the most successful food for development program in Africa. The program supported price liberalization in the basic cereals markets, provided a "safety net" for difficult policy reforms, and improved food security; it increased cereal availability as producers responded to price incentives and improved access by consumers as consumer prices stabilized. Commodities valued at \$2,800,000 were provided in FY 1992.
- Mauritania** The *Title II* program provided 1,938 metric tons of food (nonfat dried milk, soy-fortified sorghum grits, vegetable oil, and wheat-soy blend), valued at \$776,800. The programs are managed by the World Food Program and DOULO, and include food for work and maternal and child health activities. More than 54,000 Mauritians benefited.
- Mauritius** The *Title II* program provided 1,000 metric tons of wheat flour and corn-soy milk, valued at \$348,800. The World Food Program managed these food for work and maternal and child health programs benefitting 181,000 people.
- Mozambique** The *Title II* program provided 42,579 metric tons of food (corn, beans, vegetable oil, and corn-soy blend), valued at \$14,850,400. ADRA, the World Food Program, and World Vision Relief and Development managed activities benefitting more than 441,800 people; these included direct feeding and refugee support programs.
- The *Title III* program is in the second year of a two-year \$68.2 million program; it supports market liberalization and promotes a targeted safety net to enhance the food security of the poor by replacing an inefficient and non-targeted rationing system.
- The *Section 416(b)* program provided 200,000 metric tons of food, valued at \$72,200,000.
- Namibia** The *Section 416(b)* program provided 10,000 metric tons of food, valued at \$2,580,000.
- Niger** The *Title II* program provided 17,894 metric tons of sorghum, grits, and vegetable oil, valued at \$4,944,400. The World Food Program managed this food for work program benefitting 154,000 people.
- Sao Tome and Principe** The *Title II* program provided 2,187 metric tons of food (corn meal, beans, rice, and vegetable oil), valued at \$883,800. The World Food Program managed these food for work and school feeding programs benefitting 60,700 people.
- Senegal** The *Title II* program provided 3,118 metric tons of sorghum valued at \$520,700 for a World Food Program food for work program benefitting 65,000 people.
- The *Title III* program is a three-year \$30 million program approved in FY 1992, supporting politically sensitive and yet essential policy reforms in natural resource management in order

to halt degradation of the fragile resource base, a situation widely agreed to be the major constraint to food security in Senegal.

Sierra Leone

The *Title I* program provided 30,900 metric tons of rice and wheat, valued at \$10 million. Local currencies generated by the sales of these commodities will support policy reforms in the agricultural sector and increased private sector participation in agricultural markets.

The *Title II* program provided 12,185 metric tons of food (bulgur, corn-soy blend, vegetable oil, wheat-soy blend, and beans), valued at \$5,659,500. Programs managed by Catholic Relief Services and the World Food Program benefitted more than 222,000 people; they included food for work, maternal and child health, and refugee support activities.

Somalia

The *Title II* program provided 56,883 metric tons of food (wheat, beans, rice, and vegetable oil), valued at \$38,548,700. Catholic Relief Services, the International Committee of the Red Cross, and Save the Children Foundation managed programs benefitting more than 1.9 million Somalians in direct refugee feeding and other programs.

The *Section 416(b)* program provided 20,000 metric tons of food, valued at \$3,825,000.

Sudan

The *Title II* program provided 50,470 metric tons of food (corn-soy milk, lentils, vegetable oil, sorghum, and rice), valued at \$26,081,000, benefitting more than 1 million hungry people. A range of PVOs, including ADRA, Save the Children Foundation, and World Vision Relief and Development, as well as the World Food Program, managed refugee assistance programs and other activities including food for work.

The *Section 416(b)* program provided 75,430 metric tons of food, valued at \$20,488,600.

Swaziland

The *Section 416(b)* program provided 10,500 metric tons of food, valued at \$3,108,100.

Togo

The *Title II* program provided 13,624 metric tons of food (bulgur, vegetable oil, wheat-soy blend, wheat, and soy-fortified cornmeal), valued at \$4,404,900. Catholic Relief Services, the World Food Program, and Opportunities Industrialization Centers International, managed programs benefitting more than 148,400 Togolese, including maternal and child health, food for work, and school feeding activities. One fourth of these resources are monetized with local proceeds used for development projects.

Uganda

The *Title II* program provided 4,035 metric tons of corn-soya blend and vegetable oil, valued at \$4,599,300. A special program was designed and implemented in conjunction with a dollar-funded cooperative development project. American Cooperative Development International implemented both projects and used the local currencies generated by the sales of the P.L. 480 vegetable oil to capitalize the cooperative credit organization established under the dollar project. The World Food Program also managed a maternal and child health program benefitting 1,000 people.

The *Title III* program is in the first year of a three-year, \$36 million program seeking to increase employment and incomes in order to improve access to available food for poorer Ugandans. The program supports regulatory policy reforms which will liberalize the agro-business sector. In FY 1992, \$4,100,000 in commodities were provided.

Zambia

The *Title II* program provided 20,000 metric tons of corn, valued at \$6,764,100, in emergency response to the ongoing drought affecting the region.

The *Title III* program is in the first year of a two-year program, valued at \$36 million, which is being implemented as an integrated part of a dollar assistance program. The program supports price reforms in cereals. The new government is committed to cereals price liberalization and is implementing the reforms more quickly than originally anticipated, even in the face of terrible drought.

The *Section 416(b)* program provided 110,000 metric tons of food, valued at \$37,080,000.

Zimbabwe

The *Title I* program provided 332,750 metric tons of corn, wheat, and vegetable oil, valued at \$40 million. The local currencies generated will support policy and price reform in the agricultural sector and structural adjustments designed to encourage private sector participation.

The *Section 416(b)* program provided 203,750 metric tons of food, valued at \$68,520,000.

ASIA

Afghanistan

The *Title II* program provided 130,000 metric tons of wheat, valued at \$31,200,000. The World Food Program managed these refugee programs.

Bangladesh

The *Title II* program provided 95,000 metric tons of wheat, valued at \$18,611,800, through a food for work program under the guidance of CARE/Bangladesh. The program benefitted more than 5.2 million Bangladeshi workers and dependents.

The *Title III* program is a four-year effort providing a total of \$268 million. FY 1992 imports were valued at \$58.2 million. The program uses Title III wheat, a self-targeting commodity which accounts for 15 percent of total food grains consumed by low-income households, to fill a gap between demand and local production. Local currencies generated are used to improve food security through increased economic growth and to improve public sector investment and management.

Bhutan

The *Title II* program provided 1,458 metric tons of bulgur, vegetable oil, and wheat-soy blend, valued at \$878,000. The World Food Program managed this school feeding program which reached 35,000 children.

Cambodia

The *Title II* program provided 1,550 metric tons of vegetable oil, valued at \$1,515,700, through refugee programs managed by the United Nations Border Relief Organization benefitting 300,000 displaced persons.

India

The *Title II* program in India has been the largest non-emergency program worldwide since P.L. 480 began in 1954. In FY 1992, the program provided 249,803 metric tons of corn-soy blend, vegetable oil, and bulgur, valued at \$113,429,400. More than 8.5 million people benefitted from innovative programs managed by CARE and Catholic Relief Services, including school feeding, maternal and child health, and food for work activities.

Nearly 7.1 million at-risk mothers and children received food supplements in the most ambitious child-survival program in the world.

The *Title III* program is a new activity in India, inaugurated in FY 1992 as a two-year \$50 million program that will support the economic reform process by introducing an auction mechanism for the P.L. 480 commodity (vegetable oil); facilitating the introduction of an "exit policy" for failing firms by creating a "safety net" program for retrenched workers; and providing credit to small and medium agro-industries. In FY 1992 \$25 million was provided.

- Indonesia** The *Title II* program provided 13,899 metric tons of food (rice, wheat, and wheat-soy blend), valued at \$5,126,500. The food for work and maternal and child health programs managed by Catholic Relief Services benefitted more than 159,000 Indonesians.
- Laos** The *Title II* program provided 1,470 metric tons of vegetable oil, valued at \$1,345,000 for programs assisting approximately 50,000 displaced persons.
- Nepal** The *Title II* program provided 1,840 metric tons of wheat-soy blend, valued at \$1,102,500 for emergency and maternal and child health programs managed by the World Food Program, benefitting 154,000 people.
- Pakistan** The *Title II* program provided 250 metric tons of vegetable oil, valued at \$229,800 for a World Food Program food for work program benefitting 203,000 people.
- The *Section 416(b)* program provided 10,000 metric tons of food, valued at \$20,164,000.
- Philippines** The *Title I* program provided 97,000 metric tons of soybean meal, valued at \$20 million. The local currencies generated will promote agricultural cooperatives and farmer-owned enterprises and encourage competitive private sector participation in the storage and handling of the commodities.
- The *Title II* program provided 61,792 metric tons of food (bulgur, peas, corn-soy blend, and nonfat dried milk), valued at \$23,429,300. Programs managed by CARE and Catholic Relief Services include maternal and child health, school feeding, and monetizations to support local development activities; they benefitted more than 2.9 million Filipinos.
- Sri Lanka** The *Title I* program provided 75,400 metric tons of wheat, valued at \$13 million. The local currencies generated will support agricultural research and agricultural sector policy reforms. Competitive private sector participation in the handling and marketing of commodities will be encouraged.
- The *Title III* program is a three-year \$138 million activity in its second year; it provides wheat that is sold through commercial channels. (Wheat is a major source of calories for the lower deciles of the population and it accounts for one third of the country's total food import bill.) Local currencies generated by these sales support the government's movements on policy reforms designed to reduce government bureaucracy and strengthen the private sector; encourage technology transfer; increase agricultural productivity and exports; and improve the efficiency of food-grain marketing. FY 1992 allocations were valued at \$45,900,000.

EUROPE

- Albania** The *Title I* program provided 82,700 metric tons of food, valued at \$27,500,000.
- The *Title II* program provided 772 metric tons of rice and nonfat dried milk, valued at \$470,100. Managed by the League of Red Cross and Red Crescent Societies, the program benefitted more than 50,000 people.
- Armenia** The *Title I* program provided 66,000 metric tons of wheat, valued at \$9.3 million. Local currencies supported agricultural and infrastructural development.
- The *Section 416(b)* program provided 8,800 metric tons of food, valued at \$15,802,000.
- Balkan States** The *Title II* program provided 11,350 metric tons of processed food (corn-soy milk, lentils, wheat flour, wheat-soy blend, and vegetable oil), valued at \$7,128,900, to the United Nations High Commissioner for Refugees for emergency assistance to refugees and displaced persons throughout the former Yugoslavia. An additional 10,000 metric tons of wheat was provided to Macedonia to assist in refugee feeding, valued at \$2,960,000.
- Byelarus** The *Title I* program provided 145,000 metric tons of food (feed grains, and oil seeds/meals), valued at \$19.9 million. Local currencies supported agricultural and infrastructural development.
- The *Section 416(b)* program provided 200 metric tons of food, valued at \$365,000.
- Estonia** The *Title I* program provided 71,500 metric tons of wheat, valued at \$10 million. Local currencies supported a program to construct grain storage facilities to improve the national agricultural infrastructure and to assist the newly privatized grain farmers to better meet future grain needs.
- The *Section 416(b)* program provided 100,000 metric tons of food, valued at \$17,300,000.
- Georgia** The *Title I* program provided 100,000 metric tons of food, valued at \$14 million.
- Kyrgyzstan** The *Title I* program provided 56,000 metric tons of wheat, valued at \$8.3 million. Local currencies supported agricultural and infrastructural development.
- Latvia** The *Title I* program provided 60,000 metric tons of wheat, valued at \$10 million. The local currencies will provide credit for newly established private farms and will encourage private sector participation in the transportation of the grain.
- The *Section 416(b)* program provided 100,000 metric tons of food, valued at \$17,300,000.
- Lithuania** The *Title I* program provided 43,000 metric tons of soybean meal, valued at \$10 million. The local currencies will be used to provide preferential credits to farmers whose investment priorities include capital improvements, mechanization, production capacity, and storage capacity for the feed markets.
- The *Section 416(b)* program provided 100,000 metric tons of food, valued at \$17,300,000.

Moldova	The <i>Title I</i> program provided 71,700 metric tons of feed grains, valued at \$6.9 million. Local currencies supported agricultural and infrastructural development.
Poland	The <i>Section 416(b)</i> program provided 16,000 metric tons of food, valued at \$27,600,000.
Romania	The <i>Title I</i> program provided 18,000 metric tons of food, valued at \$10 million.
Russia	The <i>Section 416(b)</i> program provided 18,365 metric tons of food, valued at \$34,206,100.
Tajikistan	The <i>Title I</i> program provided 60,100 metric tons of food, valued at \$10 million.
Turkmenistan	The <i>Section 416(b)</i> program provided 1,800 metric tons of food, valued at \$3,285,000.

LATIN AMERICA

Bolivia	<p>The <i>Title II</i> program provided 48,871 metric tons of food (corn-soy milk, lentils, soy-fortified cornmeal, wheat flour, and soy-fortified bulgur), valued at \$23,510,500. ADRA, Catholic Relief Services, and Food for the Hungry International managed a wide range of food programs, including maternal and child health, school feeding, pre-school child feeding, food for work, and monetizations to support development activities. These benefitted more than 630,000 people.</p> <p>The <i>Title III</i> program approved in FY 1992 is a three-year \$65.1 million program for the importation of wheat. The program supports policy reforms in environment and natural resources, increased domestic agricultural production and marketing, rural development activities, including maternal and child health and nutrition, and increased private sector participation. Program value in FY 1992 was \$25.1 million.</p>
Brazil	<p>The <i>Title II</i> program provided 2,700 metric tons of beans and rice, valued at \$1,495,500 for a World Food Program school feeding program which reached 2.6 million children.</p> <p>The <i>Section 416(b)</i> program provided 54 metric tons of food, valued at \$98,500.</p>
Costa Rica	<p>The <i>Title I</i> program provided 90,000 metric tons of wheat and wheat flour, valued at \$15 million. Local currencies supported agricultural research and commodity quality control, natural resource conservation, and rural infrastructure development.</p> <p>The <i>Title II</i> program provided 166 metric tons of vegetable oil, valued at \$152,600 for a World Food Program food for work program benefitting 12,500 people.</p>
Dominican Republic	The <i>Title II</i> program provided 11,804 metric tons of food (bulgur, rice, beans, soybean meal, vegetable oil, and cornmeal), valued at \$4,334,100. Programs managed by CARE and the World Food Program included maternal and child health, pre-school child feeding, and school feeding activities; more than 215,100 Dominicans benefitted.

- El Salvador** The *Title I* program provided 203,000 metric tons of commodities (wheat, wheat flour, tallow, and protein meals), valued at \$30 million. The local currencies supported agricultural and health research, strengthened agricultural data analysis capabilities, and supported agricultural infrastructure improvements.
- The *Title II* program provided 11,053 metric tons of beans, rice, and vegetable oil, valued at \$6,071,600, through maternal and child health programs and food for work programs managed by Catholic Relief Services and the World Food Program. More than 323,000 people benefitted.
- Guatemala** The *Title I* program provided 120,000 metric tons of wheat, valued at \$15 million. Local currencies supported structural adjustment policy reforms and investment changes, and strengthened agricultural and health research. Competitive private sector participation in the marketing and transport of the commodities resulted in all commodity imports flowing through the private sector.
- The *Title II* program provided 33,824 metric tons of food (corn, rice, vegetable oil, corn-soy blend, soy-fortified bulgur, beans, and wheat flour), valued at \$9,779,700. CARE, Catholic Relief Services, the World Food Program, and SHARE managed food for work, maternal and child health, and monetization programs benefitting more than 492,000 Guatemalans.
- Guyana** The *Title I* program provided 58,000 metric tons of wheat, valued at \$7,500,000. The local currencies generated by these sales supported monetary and fiscal policy reforms designed to improve food security and promote development. All P.L. 480 commodities were imported and distributed by the private sector.
- Haiti** The *Title II* program provided 68,176 metric tons of food (corn-soy blend, peas, vegetable oil, soy-fortified bulgur, beans, bulgur, wheat-soy blend, and nonfat dried milk), valued at \$31,409,900. The World Food Program, ADRA, CARE, Catholic Relief Services, and INTLIFE managed a range of programs, including maternal and child health and direct relief activities, that benefitted more than 811,000 people.
- Honduras** The *Title II* program provided 29,885 metric tons of food (corn, beans, rice, nonfat dried milk, vegetable oil, soy-fortified bulgur, and wheat), valued at \$9,588,800, through programs managed by CARE and the World Food Program. These included food for work, maternal and child health, school feeding, and monetization programs and benefitted more than 475,000 Hondurans.
- The *Title III* program approved in FY 1992 is a three-year \$42 million program for the importation of wheat. The program will play a significant role in encouraging and supporting a continuation and deepening of the reforms in the agricultural sector needed to achieve overall economic growth, prosperity, and food security. In FY 1992 \$14 million was provided.
- Jamaica** The *Title I* program provided 198,000 metric tons of food (wheat, sorghum, corn, and rice), valued at \$30 million. Local currencies helped support policy changes to open Jamaica's investment regime. All of these commodities were imported and distributed through the private sector.

The *Title II* program provided 17,731 metric tons of corn, valued at \$2,757,300, which was monetized by the Jamaica Agricultural Development Foundation to support direct feeding programs for 150,000 people.

Mexico

The *Title II* program provided 25,452 metric tons of food (rice, beans, corn, vegetable oil, and sorghum), valued at \$4,853,000 for World Food Program programs benefitting more than 2.2 million people.

The *Section 416(b)* program provided 12,600 metric tons of food, valued at \$6,625,000.

Nicaragua

The *Title II* program provided 7,221 metric tons of food (lentils, rice, vegetable oil, wheat-soy blend, corn, and beans), valued at \$4,839,300. Programs managed by ADRA, the World Food Program, and CARE included food for work and maternal and child health activities and benefitted more than 114,000 people.

Panama

The *Title I* program provided 7,000 metric tons of food, valued at \$4 million.

The *Title II* program provided 2,279 metric tons of corn, beans, and vegetable oil, valued at \$486,200 for World Food Program food for work programs benefitting 10,000 people.

Paraguay

The *Title II* program provided 650 metric tons of cornmeal, valued at \$200,800 for a World Food Program food for work program benefitting more than 28,000 people.

Peru

The *Title II* program provided 164,731 metric tons of food (corn-soy masa flour, lentils, vegetable oil, wheat flour, nonfat dried milk, beans, peas, cornmeal, bulgur, corn-soy blend, and soy-fortified bulgur), valued at \$71,027,800. Several PVOs, including ADRA, CARE, CARITAS, and the Asociacion Benefica Prisma (PANFAR), managed a range of programs including food for work, direct relief, pre-school child feeding and maternal and child health; the programs benefitted almost 2.2 million Peruvians.

The *Title III* program provided \$25 million for the importation of wheat. Because of the current political situation, the program will be used to respond to humanitarian needs of the Peruvian people most vulnerable to disease and a lack of food.

Suriname

The *Title I* program provided 48,000 metric tons of wheat, feed grains, and vegetable oil, valued at \$8 million. Local currencies supported agricultural and health research and macroeconomic policy reforms designed to open the economy. All commodities were imported and distributed by the private sector.

NEAR EAST

Gaza

The *Title II* program provided 2,662 metric tons of food (beans, rice, vegetable oil, and wheat flour), valued at \$1,109,800. The program, managed by Catholic Relief Services, benefitted more than 32,000 people.

Iraq	The <i>Title II</i> program provided 28,060 metric tons of rice, wheat flour, peas, and vegetable oil, valued at \$11,763,100 for refugee feeding programs reaching 25,000 people.
Jordan	The <i>Title I</i> program provided 115,000 metric tons of wheat, valued at \$20 million. Local currencies supported programs to protect the poor from adverse price effects as reforms moved to a market-based system for agricultural inputs and outputs.
Lebanon	The <i>Title II</i> program provided 14,268 metric tons of food (bulgur, lentils, beans, rice, and vegetable oil), valued at \$8,990,700. Managed by Save the Children Foundation, the programs benefitted 135,000 refugees.
Morocco	The <i>Title II</i> program provided 10,100 metric tons of food (nonfat dried milk, vegetable oil, wheat flour, and rice), valued at \$5,039,800 through school feeding and maternal and child health programs managed by the American Jewish-Joint Distribution Committee, the World Food Program, and Catholic Relief Services. These programs benefitted more than 1.1 million Moroccans.
Tunisia	The <i>Title I</i> program provided 81,000 metric tons of wheat, valued at \$10 million.
West Bank	The <i>Title II</i> program provided 4,226 metric tons of food (beans, rice, vegetable oil, and wheat flour), valued at \$1,871,100 through programs managed by Catholic Relief Services; more than 45,000 people benefitted.
Yemen (ROY)	The <i>Title II</i> program provided 8,168 metric tons of wheat flour, peas, and vegetable oil, valued at \$2,977,000 for World Food Program school feeding programs reaching 258,000 children.

ANNEX C

OTHER FOOD SECURITY AND NUTRITION PROGRAMS AND PROJECTS

The U.S. Government is committed to reducing food insecurity and improving the nutritional status of people in the developing world, with a special emphasis on the needs of women and young children. The United States pursues this goal through a wide range of public and private sector programs. In FY 1991, for example, the United States devoted over one fifth of its foreign aid budget to programs addressing the underlying causes of food insecurity and malnutrition, in addition to the \$1.8 billion in food aid which was provided to developing and re-industrializing countries in order to enhance food security worldwide.

U.S. programs to improve food security and nutrition in developing countries are conducted by a number of institutions. Some agencies, such as A.I.D., focus primarily on developing-country problems, while other domestically focused institutions such as the USDA and the U.S. Public Health Service make contributions through research, training, and technical collaboration with developing-country partners. Organizations in the private sector, including PVOs, universities, and foundations, contribute both financial and human resources to programs that address the causes of malnutrition.

The United States also helps meet food and health needs sparked by natural and man-made disasters. This includes providing emergency food supplies, water purification units, and other commodities, as well as contributing food and other resources to assist refugee populations through relief efforts by the Office of the United Nations High Commissioner for Refugees, the American PVO community, and others.

The United States places a high priority on enhancing food security and improving the nutritional status of the world's citizens, as evidenced through a myriad of activities including targeted feeding programs, program food aid, disaster relief and emergency feeding, and agriculture, health, education, and population programs that affect the underlying causes of malnutrition. Within this portfolio, P.L. 480 program activities represent a core resource applied to the issue of food security and nutrition. However, many other programs play an essential role. The following is an illustrative list of other U.S. Government food security and nutrition activities.

A.I.D. PROGRAMS

Wellstart provides lactation management education for teams of nutrition and health professionals in teaching hospitals and government agencies. Over 400 health professionals from 30 countries and 75 teaching hospitals have attended Wellstart programs.

The **Women and Infant Nutrition Support (WINS)** project seeks to improve infant feeding practices and reduce malnutrition in women and young children.

The **Adolescent Girls Nutrition Research Program**, supported by A.I.D. and managed by the International Center for Research on Women, conducts research on biological, cultural, and lifestyle factors that affect nutritional status.

The **Clearinghouse on Infant Feeding and Maternal Nutrition** is managed by the American Public Health Association and supported by A.I.D. It serves as an international center for nutrition information, improving developing-country health practitioners' access to information.

Maternal and Neonatal Health and Nutrition (MOTHERCARE) is designed to improve pregnancy outcomes by strengthening and increasing the utilization of services and influencing behaviors that affect the health and nutritional status of mothers and newborn infants.

Nutrition Education and Social Marketing Field Support continues more than a decade of successful programs in communication by seeking to change nutrition behavior and stimulate nutrition education programs worldwide. This initiative assists A.I.D. missions, host-country institutions, and private organizations in designing, evaluating, and disseminating nutrition messages using a range of methods.

In the area of vitamin A nutrition, A.I.D. manages a coordinated program of operations research, training, and technical assistance, including substantial PVO collaboration. The **Vitamin A Field Support Project (VITAL)** works with host-country counterparts and field missions to assess vitamin A deficiencies and develop central programs. A.I.D. also supports the **International Vitamin A Consultative Group (IVACG)** which provides information, coordination, and guidance in vitamin A activities worldwide.

In efforts to combat iron deficiency anemia, A.I.D. has helped provide technical advice and assistance to developing-country private and public organizations, and worked with other donors on joint projects. A strong research and development component has helped develop new diagnostics and iron fortification techniques. A.I.D. has also supported the **International Nutritional Anemia Consultative Group (INACG)**, which coordinates information on iron deficiency anemia.

Demographic and Health Surveys (DHS) are conducted at the national level, providing detailed information on health, family planning, and nutrition, and generating updated and relevant data. DHS collects anthropometric data on infants and children, permitting monitoring of the nutritional status of the world's children.

The **Collaborative Research Support Program (CRSP)** examines the causal relationship between food intake and human biological and behavioral performance, looking at such issues as how the marginal intake of food affects growth and body size. The project has generated improved methodologies for assessing households at risk of malnutrition and has produced a set of indicators for designing highly focused nutrition interventions.

The **Food Security and Nutrition Monitoring (IMPACT)** project helps build the capacity in developing countries to acquire and use information in order to improve development policy making and ensure that policies reflect an informed understanding of the linkages between food security and nutritional status. This initiative carries out operations research activities to generate new knowledge of cost-effective and reliable indicators of nutritional status, the characteristics of effective monitoring and surveillance systems, and the impacts of development programs and policies on food security and nutritional status.

The **Food Technology and Enterprise for Development** project seeks to improve food processing and marketing technologies in order to increase the quantity, nutritional quality, safety and affordability of foods consumed by malnourished poor women and children. A project sub-component, **Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN)**, provides short-term voluntary consultant services from A.I.D. food processing industry experts.

The **Latin America and Caribbean Health and Nutrition Sustainability** project supports A.I.D. field missions and the efforts of the Latin America and Caribbean Bureau to develop, monitor, and evaluate programs in health management, financing, and nutrition. A recent report on "Current Trends in Food and Nutrition in the LAC Region" examined priorities and opportunities for improving nutrition programming in the region.

A.I.D. field missions worldwide work directly with their host-country governments and national PVOs in multi-year activities designed to improve food security and nutrition. One example is the **Integrated Child Development Services (ICDS)** project in India, which provides a comprehensive package of services for children and nursing women to reduce malnutrition and mortality. A.I.D. assistance, managed by a PVO, included food aid, assistance, training in nutrition and health education, and research.

Famine Early Warning Systems (FEWS) works closely with governments to strengthen national data collection and analysis in order to provide timely information to decision makers about potential famine situations. In FY 1991, FEWS identified problems in the food supply system that could lead to famine conditions in seven food-insecure African countries.

The **Food Security in Africa** project is a regional applied research project focusing on five themes related to food security: public and private sector roles; international trade; agricultural technology; linkages among food production, marketing, and consumption; and diverse household strategies for short-term food emergencies.

In addition to the millions of dollars spent by A.I.D. on direct nutrition and food security projects, **A.I.D.'s General Development Programming** addresses many of the underlying causes of food insecurity and malnutrition through targeted national and regional interventions in agriculture, health and family planning, natural resource management, education, institutional development, and macroeconomic policy reform.

OTHER U.S. GOVERNMENT PROGRAMS

USDA, in addition to managing the P.L. 480 Title I food aid program, carries out diverse agricultural research, technical assistance, and training activities that contribute to U.S. nutrition and food security goals at home and abroad. Hundreds of agricultural research programs are conducted, some financed through foreign currencies generated by the Food for Peace sales, and others funded directly by USDA itself. Most USDA-supported research focuses on food production, although more than 40 research activities currently address nutrition, food safety, and food quality issues.

In addition, USDA provides technical assistance valued at roughly \$33 million per year to other countries through programs financed by international donors, including A.I.D., seeking to increase food production, preserve natural resources, and improve agricultural program management. USDA also managed extensive academic and short-term training programs for foreign participants in areas such as agricultural production, nutrition, food safety, and food quality.

The **U.S. Food and Drug Administration (FDA)** carries out a number of international programs related to nutrition, food quality, and food safety, often in collaboration with developing-country institutions. In addition, the FDA provides assistance in food-related emergencies and is active in international cooperation efforts concerning nutrition.

Peace Corps programs enhance the abilities of people in developing countries to improve their quality of life through person-to-person assistance activities. Annually, approximately 1,000 volunteers in 45 countries work on maternal and child health, nutrition, community health education, and water and sanitation projects.

The **National Institute of Health (NIH)** participates in a large number of cooperative relationships with developing countries and international organizations. For example, in collaboration with scientists in other countries, NIH conducted studies on the relationship of nutrients, nutrition, and cancer rates (worldwide); nutrition's role in oral health (Peru); malnutrition's effects on reproduction, lactation, and women's work performance (worldwide); and adverse reactions to food additives (India). NIH also supports fellowships for U.S. and foreign scientists to carry out studies and research worldwide.

Centers for Disease Control (CDC) works directly with developing countries in several major program areas, providing training in nutrition status monitoring and assessment. It is active in developing methods and guidelines for nutrition monitoring, and is a collaborator in the Program Against Micronutrient Malnutrition. CDC activities have included workshops on nutrition surveillance and epidemiology, planning and management of national surveys, rapid assessments of health and nutrition status during refugee crises, and technical support for international programs related to growth monitoring.

U.S. PVOs make a substantial contribution to reducing malnutrition in developing countries. Their programs, many of which are supported with U.S. Government funding, include credit and entrepreneurial advisory services, health services, and agricultural development. PVOs also mobilize extraordinary levels of private resources—more than \$1.5 billion per year in financial and in-kind contributions and revenues—to help people in the developing world. A.I.D. supports the programs of PVOs through a variety of grants that involve significant shared funding by the grantees.